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<212> DNA
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<210> 26
<211> 1643
<212> DNA
<213> Homo sapiens

<220>
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<223> any n = a,c,g,t any unknown or other

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<211> 2713
<212> DNA
<213> Homo sapiens

<220>
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<222> (1)..(2713)
<223> any n = a,c,g,t any unknown or other

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<211> 2143
<212> DNA
<213> Homo sapiens

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<222> (1)..(2143)
<223> any n = a,c,g,t any unknown or other

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<210> 29
<211> 540
<212> DNA
<213> Homo sapiens

<220>
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<222> (1)..(540)
<223> any n = a,c,g,t any unknown or other

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<210> 30
<211> 4533
<212> DNA
<213> Homo sapiens

<220>
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<222> (1)..(4533)
<223> any n = a,c,g,t any unknown or other

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<211> 2307

<212> DNA
<213> Homo sapiens

<220>
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<223> any n = a,c,g,t any unknown or other

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<213> Homo sapiens

<220>
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<210> 33
<211> 1068
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(1068)
<223> any n = a,c,g,t any unknown or other

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<210> 34
<211> 1388
<212> DNA
<213> Homo sapiens

<220>
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<222> (1)..(1388)
<223> any n = a,c,g,t any unknown or other

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<210> 35
<211> 1452
<212> DNA
<213> Homo sapiens

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<211> 2355
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(2355)
<223> any n = a,c,g,t any unknown or other

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<210> 37
<211> 497
<212> PRT
<213> Homo sapiens

<400> 37

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Gln Ala Lys Lys Val Ile Thr Met Phe Val Gln Arg Gln Val Phe Ala
         35                  40                  45

Glu Asn Lys Asp Glu Ile Ala Leu Val Leu Phe Gly Thr Asp Gly Thr
     50                  55                  60

Asp Asn Pro Leu Ser Gly Gly Asp Gln Tyr Gln Asn Ile Thr Val His
 65                  70                  75                  80

Arg His Leu Met Leu Pro Asp Phe Asp Leu Leu Glu Asp Ile Glu Ser
                 85                  90                  95

Lys Ile Gln Pro Gly Ser Gln Gln Ala Asp Phe Leu Asp Ala Leu Ile
            100                 105                 110

Val Ser Met Asp Val Ile Gln His Glu Thr Ile Gly Lys Lys Phe Glu
        115                 120                 125

Lys Arg His Ile Glu Ile Phe Thr Asp Leu Ser Ser Arg Phe Ser Lys
    130                 135                 140

Ser Gln Leu Asp Ile Ile Ile His Ser Leu Lys Lys Cys Asp Ile Ser
```

```
145                 150                 155                 160

Leu Gln Phe Phe Leu Pro Phe Ser Leu Gly Lys Glu Asp Gly Ser Gly
                165                 170                 175

Asp Arg Gly Asp Gly Pro Phe Arg Leu Gly Gly His Gly Pro Ser Phe
            180                 185                 190

Pro Leu Lys Gly Ile Thr Glu Gln Gln Lys Glu Gly Leu Glu Ile Val
        195                 200                 205

Lys Met Val Met Ile Ser Leu Glu Gly Glu Asp Gly Leu Asp Glu Ile
    210                 215                 220

Tyr Ser Phe Ser Glu Ser Leu Arg Lys Leu Cys Val Phe Lys Lys Ile
225                 230                 235                 240

Glu Arg His Ser Ile His Trp Pro Cys Arg Leu Thr Ile Gly Ser Asn
                245                 250                 255

Leu Ser Ile Arg Ile Ala Ala Tyr Lys Ser Ile Leu Gln Glu Arg Val
            260                 265                 270

Lys Lys Thr Trp Thr Val Val Asp Ala Lys Thr Leu Lys Lys Glu Asp
        275                 280                 285

Ile Gln Lys Glu Thr Val Tyr Cys Leu Asn Asp Asp Asp Glu Thr Glu
    290                 295                 300

Val Leu Lys Glu Asp Ile Ile Gln Gly Phe Arg Tyr Gly Ser Asp Ile
305                 310                 315                 320

Val Pro Phe Ser Lys Val Asp Glu Glu Gln Met Lys Tyr Lys Ser Glu
                325                 330                 335

Gly Lys Cys Phe Ser Val Leu Gly Phe Cys Lys Ser Ser Gln Val Gln
            340                 345                 350

Arg Arg Phe Phe Met Gly Asn Gln Val Leu Lys Val Phe Ala Ala Arg
        355                 360                 365

Asp Asp Glu Ala Ala Ala Val Ala Leu Ser Ser Leu Ile His Ala Leu
    370                 375                 380

Asp Asp Leu Asp Met Val Ala Ile Val Arg Tyr Ala Tyr Asp Lys Arg
385                 390                 395                 400

Ala Asn Pro Gln Val Gly Val Ala Phe Pro His Ile Lys His Asn Tyr
                405                 410                 415

Glu Cys Leu Val Tyr Val Gln Leu Pro Phe Met Glu Asp Leu Arg Gln
            420                 425                 430

Tyr Met Phe Ser Ser Leu Lys Asn Ser Lys Lys Tyr Ala Pro Thr Glu
        435                 440                 445

Ala Gln Leu Asn Ala Val Asp Ala Leu Ile Asp Ser Met Ser Leu Ala
```

```
    450                 455                 460

Lys Lys Asp Glu Lys Thr Asp Thr Leu Glu Asp Leu Phe Pro Thr Thr
465                 470                 475                 480

Lys Ile Pro Asn Pro Arg Phe Gln Arg Leu Phe Gln Val Arg Glu Glu
                485                 490                 495

Gly
```

<210> 38
<211> 521
<212> PRT
<213> Homo sapiens

<400> 38

```
Met Val Arg Ser Gly Asn Lys Ala Ala Val Val Leu Cys Met Asp Val
  1               5                  10                  15

Gly Phe Thr Met Ser Asn Ser Ile Pro Gly Ile Glu Ser Pro Phe Glu
             20                  25                  30

Gln Ala Lys Lys Val Ile Thr Met Phe Val Gln Arg Gln Val Phe Ala
         35                  40                  45

Glu Asn Lys Asp Glu Ile Ala Leu Val Leu Phe Gly Thr Asp Gly Thr
     50                  55                  60

Asp Asn Pro Leu Ser Gly Gly Asp Gln Tyr Gln Asn Ile Thr Val His
 65                  70                  75                  80

Arg His Leu Met Leu Pro Asp Phe Asp Leu Leu Glu Asp Ile Glu Ser
                 85                  90                  95

Lys Ile Gln Pro Gly Ser Gln Gln Ala Asp Phe Leu Asp Ala Leu Ile
            100                 105                 110

Val Ser Met Asp Val Ile Gln His Glu Thr Ile Gly Lys Lys Phe Glu
        115                 120                 125

Lys Arg His Ile Glu Ile Phe Thr Asp Leu Ser Ser Arg Phe Ser Lys
    130                 135                 140

Ser Gln Leu Asp Ile Ile Ile His Ser Leu Lys Lys Cys Asp Ile Ser
145                 150                 155                 160

Leu Gln Phe Phe Leu Pro Phe Ser Leu Gly Lys Glu Asp Gly Ser Gly
                165                 170                 175

Asp Arg Gly Asp Gly Pro Phe Arg Leu Gly Gly His Gly Pro Ser Phe
            180                 185                 190

Pro Leu Lys Gly Ile Thr Glu Gln Gln Lys Glu Gly Leu Glu Ile Val
        195                 200                 205
```

```
Lys Met Val Met Ile Ser Leu Glu Gly Glu Asp Gly Leu Asp Glu Ile
    210                 215                 220

Tyr Ser Phe Ser Glu Ser Leu Arg Lys Leu Cys Val Phe Lys Lys Ile
225                 230                 235                 240

Glu Arg His Ser Ile His Trp Pro Cys Arg Leu Thr Ile Gly Ser Asn
                245                 250                 255

Leu Ser Ile Arg Ile Ala Ala Tyr Lys Ser Ile Leu Gln Glu Arg Val
            260                 265                 270

Lys Lys Thr Trp Thr Val Val Asp Ala Lys Thr Leu Lys Lys Glu Asp
        275                 280                 285

Ile Gln Lys Glu Thr Val Tyr Cys Leu Asn Asp Asp Asp Glu Thr Glu
    290                 295                 300

Leu Asn Pro Pro Ala Glu Val Thr Thr Lys Ser Gln Ile Pro Leu Ser
305                 310                 315                 320

Lys Ile Lys Thr Leu Phe Pro Leu Ile Glu Ala Lys Lys Lys Asp Gln
                325                 330                 335

Val Thr Ala Gln Glu Ile Phe Gln Asp Asn His Glu Asp Gly Pro Thr
            340                 345                 350

Ala Lys Lys Leu Lys Thr Glu Gln Gly Gly Ala His Phe Ser Val Ser
        355                 360                 365

Ser Leu Ala Glu Gly Ser Val Thr Ser Val Gly Ser Val Asn Pro Ala
    370                 375                 380

Glu Asn Phe Arg Val Leu Val Lys Gln Lys Lys Ala Ser Phe Glu Glu
385                 390                 395                 400

Ala Ser Asn Gln Leu Ile Asn His Ile Glu Gln Phe Leu Asp Thr Asn
                405                 410                 415

Glu Thr Pro Tyr Phe Met Lys Ser Ile Asp Cys Ile Arg Ala Phe Arg
            420                 425                 430

Glu Glu Ala Ile Lys Phe Ser Glu Glu Gln Arg Phe Asn Asn Phe Leu
        435                 440                 445

Lys Ala Leu Gln Glu Lys Val Glu Ile Lys Gln Leu Asn His Phe Trp
    450                 455                 460

Glu Ile Val Val Gln Asp Gly Ile Thr Leu Ile Thr Lys Glu Glu Ala
465                 470                 475                 480

Ser Gly Ser Ser Val Thr Ala Glu Glu Ala Lys Lys Phe Leu Ala Pro
                485                 490                 495

Lys Asp Lys Pro Ser Gly Asp Thr Ala Ala Val Phe Glu Glu Gly Gly
            500                 505                 510
```

```
Asp Val Asp Asp Leu Leu Asp Met Ile
        515                 520
```

<210> 39
<211> 437
<212> PRT
<213> Homo sapiens

<400> 39

```
Met Gly Cys Gly Cys Ser Ser His Pro Glu Asp Asp Trp Met Glu Asn
  1               5                  10                  15

Ile Asp Val Cys Glu Asn Cys His Tyr Pro Ile Val Pro Leu Asp Gly
             20                  25                  30

Lys Gly Thr Leu Leu Ile Arg Asn Gly Ser Glu Val Arg Asp Pro Leu
         35                  40                  45

Val Thr Tyr Glu Gly Ser Asn Pro Pro Ala Ser Pro Leu Gln Asp Asn
     50                  55                  60

Leu Val Ile Ala Leu His Ser Tyr Glu Pro Ser His Asp Gly Asp Leu
 65                  70                  75                  80

Gly Phe Glu Lys Gly Glu Gln Leu Arg Ile Leu Glu Gln Ser Gly Glu
                 85                  90                  95

Trp Trp Lys Ala Gln Ser Leu Thr Thr Gly Gln Glu Gly Phe Ile Pro
            100                 105                 110

Phe Asn Phe Val Ala Lys Ala Asn Ser Leu Glu Pro Glu Pro Trp Phe
        115                 120                 125

Phe Lys Asn Leu Ser Arg Lys Asp Ala Glu Arg Gln Leu Leu Ala Pro
    130                 135                 140

Gly Asn Thr His Gly Ser Phe Leu Ile Arg Glu Ser Glu Ser Thr Ala
145                 150                 155                 160

Gly Ser Phe Ser Leu Ser Val Arg Asp Phe Asp Gln Asn Gln Gly Glu
                165                 170                 175

Val Val Lys His Tyr Lys Ile Arg Asn Leu Asp Asn Gly Gly Phe Tyr
            180                 185                 190

Ile Ser Pro Arg Ile Thr Phe Pro Gly Leu His Glu Leu Val Arg His
        195                 200                 205

Tyr Thr Asn Ala Ser Asp Gly Leu Cys Thr Arg Leu Ser Arg Pro Cys
    210                 215                 220

Gln Thr Gln Lys Pro Gln Lys Pro Trp Trp Glu Asp Glu Trp Glu Val
225                 230                 235                 240
```

```
Pro Arg Glu Thr Leu Lys Leu Val Glu Arg Leu Gly Ala Gly Gln Phe
                245                 250                 255

Gly Glu Val Trp Met Gly Tyr Tyr Asn Gly His Thr Lys Val Ala Val
            260                 265                 270

Lys Ser Leu Lys Gln Gly Ser Met Ser Pro Asp Ala Phe Leu Ala Glu
        275                 280                 285

Ala Asn Leu Met Lys Gln Leu Gln His Gln Arg Leu Val Arg Leu Tyr
    290                 295                 300

Ala Val Val Thr Gln Glu Pro Ile Tyr Ile Ile Thr Glu Tyr Met Glu
305                 310                 315                 320

Asn Gly Ser Leu Val Asp Phe Leu Lys Thr Pro Ser Gly Ile Lys Leu
                325                 330                 335

Thr Ile Asn Lys Leu Leu Asp Met Ala Ala Gln Ile Ala Glu Gly Met
            340                 345                 350

Ala Phe Ile Glu Glu Arg Asn Tyr Ile His Arg Asp Leu Arg Ala Ala
        355                 360                 365

Asn Ile Leu Val Ser Asp Thr Leu Ser Cys Lys Ile Ala Asp Phe Gly
    370                 375                 380

Leu Ala Arg Leu Ile Glu Asp Ile His His Gln Val Arg Cys Val Val
385                 390                 395                 400

Phe Trp Asp Pro Ala Asp Gly Asn Cys His Pro Arg Pro His Pro Leu
                405                 410                 415

Pro Arg Asp Asp Gln Pro Gly Gly Asp Ser Glu Pro Gly Ala Arg Leu
            420                 425                 430

Pro His Gly Ala Pro
        435
```

<210> 40
<211> 567
<212> PRT
<213> Homo sapiens

<400> 40

```
Met Gly Cys Gly Cys Ser Ser His Pro Glu Asp Asp Trp Met Glu Asn
  1               5                  10                  15

Ile Asp Val Cys Glu Asn Cys His Tyr Pro Ile Val Pro Leu Asp Gly
             20                  25                  30

Lys Gly Thr Leu Leu Ile Arg Asn Gly Ser Glu Val Arg Asp Pro Leu
         35                  40                  45

Val Thr Tyr Glu Gly Ser Asn Pro Pro Ala Ser Pro Leu Gln Gly Asp
```

```
     50                  55                  60

Pro Arg Gln Gln Gly Leu Lys Asp Lys Ala Cys Gly Ser Leu Ala Val
 65                  70                  75                  80

Gly Phe His Leu Ser Pro Thr Tyr Phe Leu Pro Gly Leu Ala Phe Leu
                85                  90                  95

Val Pro His Pro Val Thr Pro Gly Phe Leu Pro Ile Pro Ala Arg Phe
            100                 105                 110

Ser Leu Thr Pro Leu Val Phe Thr Asp Asn Leu Val Ile Ala Leu His
        115                 120                 125

Ser Tyr Glu Pro Ser His Asp Gly Asp Leu Gly Phe Glu Lys Gly Glu
    130                 135                 140

Gln Leu Arg Ile Leu Glu Gln Ser Gly Glu Trp Trp Lys Ala Gln Ser
145                 150                 155                 160

Leu Thr Thr Gly Gln Glu Gly Phe Ile Pro Phe Asn Phe Val Ala Lys
                165                 170                 175

Ala Asn Ser Leu Glu Pro Glu Pro Trp Phe Phe Lys Asn Leu Ser Arg
            180                 185                 190

Lys Asp Ala Glu Arg Gln Leu Leu Ala Pro Gly Asn Thr His Gly Ser
        195                 200                 205

Phe Leu Ile Arg Glu Ser Glu Ser Thr Ala Gly Ser Phe Ser Leu Ser
    210                 215                 220

Val Arg Asp Phe Asp Gln Asn Gln Gly Glu Val Val Lys His Tyr Lys
225                 230                 235                 240

Ile Arg Asn Leu Asp Asn Gly Gly Phe Tyr Ile Ser Pro Arg Ile Thr
                245                 250                 255

Phe Pro Gly Leu His Glu Leu Val Arg His Tyr Thr Asn Ala Ser Asp
            260                 265                 270

Gly Leu Cys Thr Arg Leu Ser Arg Pro Cys Gln Thr Gln Lys Pro Gln
        275                 280                 285

Lys Pro Trp Trp Glu Asp Glu Trp Glu Val Pro Arg Glu Thr Leu Lys
    290                 295                 300

Leu Val Glu Arg Leu Gly Ala Gly Gln Phe Gly Glu Val Trp Met Gly
305                 310                 315                 320

Tyr Tyr Asn Gly His Thr Lys Val Ala Val Lys Ser Leu Lys Gln Gly
                325                 330                 335

Ser Met Ser Pro Asp Ala Phe Leu Ala Glu Ala Asn Leu Met Lys Gln
            340                 345                 350

Leu Gln His Gln Arg Leu Val Arg Leu Tyr Ala Val Val Thr Gln Glu
```

```
        355                 360                 365

Pro Ile Tyr Ile Ile Thr Glu Tyr Met Glu Asn Gly Ser Leu Val Asp
    370                 375                 380

Phe Leu Lys Thr Pro Ser Gly Ile Lys Leu Thr Ile Asn Lys Leu Leu
385                 390                 395                 400

Asp Met Ala Ala Gln Ile Ala Glu Gly Met Ala Phe Ile Glu Glu Arg
                405                 410                 415

Asn Tyr Ile His Arg Asp Leu Arg Ala Ala Asn Ile Leu Val Ser Asp
            420                 425                 430

Thr Leu Ser Cys Lys Ile Ala Asp Phe Gly Leu Ala Arg Leu Ile Glu
        435                 440                 445

Asp Asn Glu Tyr Thr Ala Arg Glu Gly Ala Lys Phe Pro Ile Lys Trp
    450                 455                 460

Thr Ala Pro Glu Ala Ile Asn Tyr Gly Thr Phe Thr Ile Lys Ser Asp
465                 470                 475                 480

Val Trp Ser Phe Gly Ile Leu Leu Thr Glu Ile Val Thr His Gly Arg
                485                 490                 495

Ile Pro Tyr Pro Gly Met Thr Asn Pro Glu Val Ile Gln Asn Leu Glu
            500                 505                 510

Arg Gly Tyr Arg Met Val Arg Pro Asp Asn Cys Pro Glu Glu Leu Tyr
        515                 520                 525

Gln Leu Met Arg Leu Cys Trp Lys Glu Arg Pro Glu Asp Arg Pro Thr
    530                 535                 540

Phe Asp Tyr Leu Arg Ser Val Leu Glu Asp Phe Phe Thr Ala Thr Glu
545                 550                 555                 560

Gly Gln Tyr Gln Pro Gln Pro
                565
```

<210> 41
<211> 192
<212> PRT
<213> Homo sapiens

<400> 41

```
Met Arg Ile Ala Val Ile Cys Phe Cys Leu Leu Gly Ile Thr Cys Ala
  1               5                  10                  15

Ile Pro Val Lys Gln Ala Asp Ser Gly Ser Ser Glu Glu Lys Gln Leu
             20                  25                  30

Tyr Asn Lys Tyr Pro Asp Ala Val Ala Thr Trp Leu Asn Pro Asp Pro
         35                  40                  45
```

```
Ser Gln Lys Gln Asn Leu Leu Ala Pro Gln Asn Ala Val Ser Ser Glu
     50                  55                  60

Glu Thr Asn Asp Phe Lys Gln Glu Thr Leu Pro Ser Lys Ser Asn Glu
 65                  70                  75                  80

Ser His Asp His Met Asp Asp Met Asp Asp Glu Asp Asp Asp Asp His
                 85                  90                  95

Val Asp Ser Gln Asp Ser Ile Asp Ser Asn Asp Ser Asp Asp Val Asp
            100                 105                 110

Asp Thr Asp Asp Ser His Gln Ser Asp Glu Ser His His Ser Asp Glu
        115                 120                 125

Ser Asp Glu Leu Val Thr Asp Phe Pro Thr Asp Leu Pro Ala Thr Glu
    130                 135                 140

Val Phe Thr Pro Val Val Pro Thr Val Asp Thr Tyr Asp Gly Arg Gly
145                 150                 155                 160

Asp Ser Val Val Tyr Gly Leu Arg Ser Lys Ser Lys Lys Phe Arg Arg
                165                 170                 175

Pro Asp Ile Gln Val Asn Pro Leu Thr Asp Thr Pro Asp Gly Ser Asp
            180                 185                 190
```

<210> 42
<211> 109
<212> PRT
<213> Homo sapiens

```
<400> 42
Met Glu Leu Gly Leu Pro Gln Val Pro Pro Ala Val Asp Ala Glu Leu
  1               5                  10                  15

Leu Cys Arg Phe Val Asp Arg Gly Leu Pro Tyr Pro Asp Val Ser Ser
             20                  25                  30

Ala Asn Thr Pro Pro Ala Val Gly Leu Ser Pro Pro Thr Pro Tyr Phe
         35                  40                  45

Glu Pro Cys Ala Leu Pro Ser Pro His Arg His Gln Leu Ala Glu Ala
     50                  55                  60

Ile Pro Cys Thr Leu Ala Val Ser Asn Pro His Thr Asp Ala Trp Lys
 65                  70                  75                  80

Ser His Gly Leu Val Glu Val Ala Ser Tyr Cys Glu Glu Ser Arg Gly
                 85                  90                  95
```

```
Asn Asn Gln Trp Val Pro Tyr Ile Ser Leu Gln Glu Arg
            100                 105
```

<210> 43
<211> 331
<212> PRT
<213> Homo sapiens

<400> 43

```
Met Arg Ala Arg Pro Gln Val Cys Glu Ala Leu Leu Phe Ala Leu Ala
  1               5                  10                  15

Leu Gln Thr Gly Val Cys Tyr Gly Ile Lys Trp Leu Ala Leu Ser Lys
             20                  25                  30

Thr Pro Ser Ala Leu Ala Leu Asn Gln Thr Gln His Cys Lys Gln Leu
         35                  40                  45

Glu Gly Leu Val Ser Ala Gln Val Gln Leu Cys Arg Ser Asn Leu Glu
     50                  55                  60

Leu Met His Thr Val Val His Ala Ala Arg Glu Val Met Lys Ala Cys
 65                  70                  75                  80

Arg Arg Ala Phe Ala Asp Met Arg Trp Asn Cys Ser Ser Ile Glu Leu
                 85                  90                  95

Ala Pro Asn Tyr Leu Leu Asp Leu Glu Arg Gly Thr Arg Glu Ser Ala
            100                 105                 110

Phe Val Tyr Ala Leu Ser Ala Ala Ala Ile Ser His Ala Ile Ala Arg
        115                 120                 125

Ala Cys Thr Ser Gly Asp Leu Pro Gly Cys Ser Cys Gly Pro Val Pro
    130                 135                 140

Gly Glu Pro Pro Gly Pro Gly Asn Arg Trp Gly Arg Cys Ala Asp Asn
145                 150                 155                 160

Leu Ser Tyr Gly Leu Leu Met Gly Ala Lys Phe Ser Asp Ala Pro Met
                165                 170                 175

Lys Val Lys Lys Thr Gly Ser Gln Ala Asn Lys Leu Met Arg Leu His
            180                 185                 190

Asn Ser Glu Val Gly Arg Gln Ala Leu Arg Ala Ser Leu Glu Met Lys
        195                 200                 205

Cys Lys Cys His Gly Val Ser Gly Ser Cys Ser Ile Arg Thr Cys Trp
    210                 215                 220

Lys Gly Leu Gln Glu Leu Gln Asp Val Ala Ala Asp Leu Lys Thr Arg
225                 230                 235                 240

Tyr Leu Ser Ala Thr Lys Val Val His Arg Pro Met Gly Thr Arg Lys
```

```
                245                 250                 255

His Leu Val Pro Lys Asp Leu Asp Ile Arg Pro Val Lys Asp Ser Glu
            260                 265                 270

Leu Val Tyr Leu Gln Ser Ser Pro Asp Phe Cys Met Lys Asn Glu Lys
        275                 280                 285

Val Gly Ser His Gly Thr Gln Asp Arg Gln Cys Asn Lys Thr Ser Asn
    290                 295                 300

Gly Ser Asp Ser Cys Asp Leu Met Cys Cys Tyr Val Thr Cys Arg Arg
305                 310                 315                 320

Cys Glu Arg Thr Val Glu Arg Tyr Val Cys Lys
                325                 330
```

<210> 44
<211> 237
<212> PRT
<213> Homo sapiens

<400> 44

```
Met Arg Ala Arg Pro Gln Val Cys Glu Ala Leu Leu Phe Ala Leu Ala
  1               5                  10                  15

Leu Gln Thr Gly Val Cys Tyr Gly Ile Lys Trp Leu Ala Leu Ser Lys
             20                  25                  30

Thr Pro Ser Ala Leu Ala Leu Asn Gln Thr Gln His Cys Lys Gln Leu
         35                  40                  45

Glu Gly Leu Val Ser Ala Gln Val Gln Leu Cys Arg Ser Asn Leu Glu
     50                  55                  60

Leu Met His Thr Val Val His Ala Ala Arg Glu Val Met Lys Ala Cys
 65                  70                  75                  80

Arg Arg Ala Phe Ala Asp Met Arg Trp Asn Cys Ser Ser Ile Glu Leu
                 85                  90                  95

Ala Pro Asn Tyr Leu Leu Asp Leu Glu Arg Gly Thr Arg Glu Ser Ala
            100                 105                 110

Phe Val Tyr Ala Ala Ala Asp Leu Lys Thr Arg Tyr Leu Ser Ala Thr
        115                 120                 125

Lys Val Val His Arg Pro Met Gly Thr Arg Lys His Leu Val Pro Lys
    130                 135                 140

Asp Leu Asp Ile Arg Pro Val Lys Asp Ser Glu Leu Val Tyr Leu Gln
145                 150                 155                 160

Ser Ser Pro Asp Phe Cys Met Lys Asn Glu Lys Val Gly Ser His Gly
                165                 170                 175
```

```
Thr Gln Asp Arg Gln Cys Asn Lys Thr Ser Asn Gly Ser Asp Ser Cys
            180                 185                 190

Asp Leu Met Cys Cys Gly Arg Gly Tyr Asn Pro Tyr Thr Asp Arg Val
        195                 200                 205

Val Glu Arg Cys His Cys Lys Tyr His Trp Cys Cys Tyr Val Thr Cys
    210                 215                 220

Arg Arg Cys Glu Arg Thr Val Glu Arg Tyr Val Cys Lys
225                 230                 235
```

<210> 45
<211> 615
<212> PRT
<213> Homo sapiens

<400> 45

```
Met Ser Pro Phe Leu Arg Ile Gly Leu Ser Asn Phe Asp Cys Gly Ser
  1               5                  10                  15

Cys Gln Ser Cys Gln Gly Glu Ala Val Asn Pro Tyr Cys Ala Val Leu
             20                  25                  30

Val Lys Glu Tyr Val Glu Ser Glu Asn Gly Gln Met Tyr Ile Gln Lys
         35                  40                  45

Lys Pro Thr Met Tyr Pro Pro Trp Asp Ser Thr Phe Asp Ala His Ile
     50                  55                  60

Asn Lys Gly Arg Val Met Gln Ile Ile Val Lys Gly Lys Asn Val Asp
 65                  70                  75                  80

Leu Ile Ser Glu Thr Thr Val Glu Leu Tyr Ser Leu Ala Glu Arg Cys
                 85                  90                  95

Arg Lys Asn Asn Gly Lys Thr Glu Ile Trp Leu Glu Leu Lys Pro Gln
            100                 105                 110

Gly Arg Met Leu Met Asn Ala Arg Tyr Phe Leu Glu Met Ser Asp Thr
        115                 120                 125

Lys Asp Met Asn Glu Phe Glu Thr Glu Gly Phe Phe Ala Leu His Gln
    130                 135                 140

Arg Arg Gly Ala Ile Lys Gln Ala Lys Val His His Val Lys Cys His
145                 150                 155                 160

Glu Phe Thr Ala Thr Phe Phe Pro Gln Pro Thr Phe Cys Ser Val Cys
                165                 170                 175

His Glu Phe Val Trp Gly Leu Asn Lys Gln Gly Tyr Gln Cys Arg Gln
            180                 185                 190
```

```
Cys Asn Ala Ala Ile His Lys Lys Cys Ile Asp Lys Val Ile Ala Lys
        195                 200                 205

Cys Thr Gly Ser Ala Ile Asn Ser Arg Glu Thr Met Phe His Lys Glu
    210                 215                 220

Arg Phe Lys Ile Asp Met Pro His Arg Phe Lys Val Tyr Asn Tyr Lys
225                 230                 235                 240

Ser Pro Thr Phe Cys Glu His Cys Gly Thr Leu Leu Trp Gly Leu Ala
                245                 250                 255

Arg Gln Gly Leu Lys Cys Asp Ala Cys Gly Met Asn Val His His Arg
            260                 265                 270

Cys Gln Thr Lys Val Ala Asn Leu Cys Gly Ile Asn Gln Lys Leu Met
        275                 280                 285

Ala Glu Ala Leu Ala Met Ile Glu Ser Thr Gln Gln Ala Arg Cys Leu
    290                 295                 300

Arg Asp Thr Glu Gln Ile Phe Arg Glu Gly Pro Val Glu Ile Gly Leu
305                 310                 315                 320

Pro Cys Ser Ile Lys Asn Glu Ala Arg Pro Pro Cys Leu Pro Thr Pro
                325                 330                 335

Gly Lys Arg Glu Pro Gln Gly Ile Ser Trp Glu Ser Pro Leu Asp Glu
            340                 345                 350

Val Asp Lys Met Cys His Leu Pro Glu Pro Glu Leu Asn Lys Glu Arg
        355                 360                 365

Pro Ser Leu Gln Ile Lys Leu Lys Ile Glu Asp Phe Ile Leu His Lys
    370                 375                 380

Met Leu Gly Lys Gly Ser Phe Gly Lys Val Phe Leu Ala Glu Phe Lys
385                 390                 395                 400

Lys Thr Asn Gln Phe Phe Ala Ile Lys Ala Leu Lys Lys Asp Val Val
                405                 410                 415

Leu Met Asp Asp Asp Val Glu Cys Thr Met Val Glu Lys Arg Val Leu
            420                 425                 430

Ser Leu Ala Trp Glu His Pro Phe Leu Thr His Met Phe Cys Thr Phe
        435                 440                 445

Gln Thr Lys Glu Asn Leu Phe Phe Val Met Glu Tyr Leu Asn Gly Gly
    450                 455                 460

Asp Leu Met Tyr His Ile Gln Ser Cys His Lys Phe Asp Leu Ser Arg
465                 470                 475                 480

Ala Thr Phe Tyr Ala Ala Glu Ile Ile Leu Gly Leu Gln Phe Leu His
                485                 490                 495
```

```
Ser Lys Gly Ile Val Tyr Arg Asp Leu Lys Leu Asp Asn Ile Leu Leu
            500                 505                 510

Asp Lys Asp Gly His Ile Lys Ile Ala Asp Phe Gly Met Cys Lys Glu
        515                 520                 525

Asn Met Leu Gly Asp Ala Lys Thr Asn Thr Phe Cys Gly Thr Pro Asp
    530                 535                 540

Tyr Ile Ala Pro Glu Ile Leu Leu Gly Gln Lys Tyr Asn His Ser Val
545                 550                 555                 560

Asp Trp Trp Ser Phe Gly Val Leu Leu Tyr Glu Met Leu Ile Gly Gln
                565                 570                 575

Ser Pro Phe His Gly Gln Asp Glu Glu Glu Leu Phe His Ser Ile Arg
            580                 585                 590

Met Asp Asn Pro Phe Tyr Pro Arg Trp Leu Glu Lys Glu Ala Lys Asp
        595                 600                 605

Leu Leu Val Lys Val Arg Ser
    610                 615
```

<210> 46
<211> 292
<212> PRT
<213> Homo sapiens

<400> 46

```
Met Pro Ile Thr Arg Met Arg Met Arg Pro Trp Leu Glu Met Gln Ile
  1               5                  10                  15

Asn Ser Asn Gln Ile Pro Gly Leu Ile Trp Ile Asn Lys Glu Glu Met
             20                  25                  30

Ile Phe Gln Ile Pro Trp Lys His Ala Ala Lys His Gly Trp Asp Ile
         35                  40                  45

Asn Lys Asp Ala Cys Leu Phe Arg Ser Trp Ala Ile His Thr Gly Arg
     50                  55                  60

Tyr Lys Ala Gly Glu Lys Glu Pro Asp Pro Lys Thr Trp Lys Ala Asn
 65                  70                  75                  80

Phe Arg Cys Ala Met Asn Ser Leu Pro Asp Ile Glu Glu Val Lys Asp
                 85                  90                  95

Gln Ser Arg Asn Lys Gly Ser Ser Ala Val Arg Val Tyr Arg Met Leu
            100                 105                 110

Pro Pro Leu Thr Lys Asn Gln Arg Lys Glu Arg Lys Ser Lys Ser Ser
        115                 120                 125

Arg Asp Ala Lys Ser Lys Ala Lys Arg Lys Ser Cys Gly Asp Ser Ser
```

```
    130                 135                 140

Pro Asp Thr Phe Ser Asp Gly Leu Ser Ser Ser Thr Leu Pro Asp Asp
145                 150                 155                 160

His Ser Ser Tyr Thr Val Pro Gly Tyr Met Gln Asp Leu Glu Val Glu
                165                 170                 175

Gln Ala Leu Thr Pro Ala Leu Ser Pro Cys Ala Val Ser Ser Thr Leu
            180                 185                 190

Pro Asp Trp His Ile Pro Val Glu Val Val Pro Asp Ser Thr Ser Asp
        195                 200                 205

Leu Tyr Asn Phe Gln Val Ser Pro Met Pro Ser Thr Ser Glu Ala Thr
    210                 215                 220

Thr Asp Glu Asp Glu Glu Gly Lys Leu Pro Glu Asp Ile Met Lys Leu
225                 230                 235                 240

Leu Glu Gln Ser Glu Trp Gln Pro Thr Asn Val Asp Gly Lys Gly Tyr
                245                 250                 255

Leu Leu Asn Glu Pro Gly Val Gln Pro Thr Ser Val Tyr Gly Asp Phe
            260                 265                 270

Ser Cys Lys Glu Glu Pro Glu Ile Asp Ser Pro Gly Gly Lys Lys Ala
        275                 280                 285

Pro Gly Ser Leu
    290
```

<210> 47
<211> 702
<212> PRT
<213> Homo sapiens

<400> 47

```
Met Trp Ser Trp Lys Cys Leu Leu Phe Trp Ala Val Leu Val Thr Ala
  1               5                  10                  15

Thr Leu Cys Thr Ala Arg Pro Ser Pro Thr Leu Pro Glu Gln Ala Gln
             20                  25                  30

Pro Trp Gly Ala Pro Val Glu Val Glu Ser Phe Leu Val His Pro Gly
         35                  40                  45

Asp Leu Leu Gln Leu Arg Cys Arg Leu Arg Asp Asp Val Gln Ser Ile
     50                  55                  60

Asn Trp Leu Arg Asp Gly Val Gln Leu Ala Glu Ser Asn Arg Thr Arg
 65                  70                  75                  80

Ile Thr Gly Glu Glu Val Glu Val Gln Asp Ser Val Pro Ala Asp Ser
                 85                  90                  95
```

```
Gly Leu Tyr Ala Cys Val Thr Ser Ser Pro Ser Gly Ser Asp Thr Thr
            100                 105                 110

Tyr Phe Ser Val Asn Val Ser Asp Ala Leu Pro Ser Ser Glu Asp Asp
        115                 120                 125

Asp Asp Asp Asp Asp Ser Ser Ser Glu Glu Lys Glu Thr Asp Asn Thr
    130                 135                 140

Lys Pro Asn Arg Met Pro Val Ala Pro Tyr Trp Thr Ser Pro Glu Lys
145                 150                 155                 160

Met Glu Lys Lys Leu His Ala Val Pro Ala Ala Lys Thr Val Lys Phe
                165                 170                 175

Lys Cys Pro Ser Ser Gly Thr Pro Asn Pro Thr Leu Arg Trp Leu Lys
            180                 185                 190

Asn Gly Lys Glu Phe Lys Pro Asp His Arg Ile Gly Gly Tyr Lys Val
        195                 200                 205

Arg Tyr Ala Thr Trp Ser Ile Ile Met Asp Ser Val Val Pro Ser Asp
    210                 215                 220

Lys Gly Asn Tyr Thr Cys Ile Val Glu Asn Glu Tyr Gly Ser Ile Asn
225                 230                 235                 240

His Thr Tyr Gln Leu Asp Val Val Glu Arg Ser Pro His Arg Pro Ile
                245                 250                 255

Leu Gln Ala Gly Leu Pro Ala Asn Lys Thr Val Ala Leu Gly Ser Asn
            260                 265                 270

Val Glu Phe Met Cys Lys Val Tyr Ser Asp Pro Gln Pro His Ile Gln
        275                 280                 285

Trp Leu Lys His Ile Glu Val Asn Gly Ser Lys Ile Gly Pro Asp Asn
    290                 295                 300

Leu Pro Tyr Val Gln Ile Leu Lys Thr Ala Gly Val Asn Thr Thr Asp
305                 310                 315                 320

Lys Glu Met Glu Val Leu His Leu Arg Asn Val Ser Phe Glu Asp Ala
                325                 330                 335

Gly Glu Tyr Thr Cys Leu Ala Gly Asn Ser Ile Gly Leu Ser His His
            340                 345                 350

Ser Ala Trp Leu Thr Val Leu Glu Ala Leu Glu Glu Arg Pro Ala Val
        355                 360                 365

Met Thr Ser Pro Leu Tyr Leu Glu Ile Ile Ile Tyr Cys Thr Gly Ala
    370                 375                 380

Phe Leu Ile Ser Cys Met Val Gly Ser Val Ile Val Tyr Lys Met Lys
385                 390                 395                 400
```

Ser Gly Thr Lys Lys Ser Asp Phe His Ser Gln Met Ala Val His Lys
405 410 415

Leu Ala Lys Ser Ile Pro Leu Arg Arg Gln Val Thr Val Ser Ala Asp
420 425 430

Ser Ser Ala Ser Met Asn Ser Gly Val Leu Leu Val Arg Pro Ser Arg
435 440 445

Leu Ser Ser Ser Gly Thr Pro Met Leu Ala Gly Val Ser Glu Tyr Glu
450 455 460

Leu Pro Glu Asp Pro Arg Trp Glu Leu Pro Arg Asp Arg Leu Val Leu
465 470 475 480

Gly Lys Pro Leu Gly Glu Gly Cys Phe Gly Gln Val Val Leu Ala Glu
485 490 495

Ala Ile Gly Leu Asp Lys Asp Lys Pro Asn Arg Val Thr Lys Val Ala
500 505 510

Val Lys Met Leu Lys Ser Asp Ala Thr Glu Lys Asp Leu Ser Asp Leu
515 520 525

Ile Ser Glu Met Glu Met Met Lys Met Ile Gly Lys His Lys Asn Ile
530 535 540

Ile Asn Leu Leu Gly Ala Cys Thr Gln Asp Gly Pro Leu Tyr Val Ile
545 550 555 560

Val Glu Tyr Ala Ser Lys Gly Asn Leu Arg Glu Tyr Leu Gln Ala Arg
565 570 575

Arg Pro Pro Gly Leu Glu Tyr Cys Tyr Asn Pro Ser His Asn Pro Glu
580 585 590

Glu Gln Leu Ser Ser Lys Asp Leu Val Ser Cys Ala Tyr Gln Val Ala
595 600 605

Arg Gly Met Glu Tyr Leu Ala Ser Lys Lys Cys Ile His Arg Asp Leu
610 615 620

Ala Ala Arg Asn Val Leu Val Thr Glu Asp Asn Val Met Lys Ile Ala
625 630 635 640

Asp Phe Gly Leu Ala Arg Asp Ile His His Ile Asp Tyr Tyr Lys Lys
645 650 655

Thr Thr Asn Gly Arg Leu Pro Val Lys Trp Met Ala Pro Glu Ala Leu
660 665 670

Phe Asp Arg Ile Tyr Thr His Gln Ser Asp Val Trp Ser Phe Gly Val
675 680 685

Pro His Thr Pro Val Cys Leu Trp Arg Asn Phe Ser Ser Cys
690 695 700

<210> 48
<211> 295
<212> PRT
<213> Homo sapiens

<400> 48

```
Met Pro Lys Arg Gly Lys Lys Gly Ala Val Ala Glu Asp Gly Asp Glu
  1               5                  10                  15

Leu Arg Thr Glu Pro Glu Ala Lys Lys Ser Lys Thr Ala Ala Lys Lys
             20                  25                  30

Asn Asp Lys Glu Ala Ala Gly Glu Gly Pro Ala Leu Tyr Glu Asp Pro
         35                  40                  45

Pro Asp Gln Lys Thr Ser Pro Ser Gly Lys Pro Ala Thr Leu Lys Ile
     50                  55                  60

Cys Ser Trp Asn Val Asp Gly Leu Arg Ala Trp Ile Lys Lys Lys Gly
 65                  70                  75                  80

Leu Asp Trp Val Lys Glu Glu Ala Pro Asp Ile Leu Cys Leu Gln Glu
                 85                  90                  95

Thr Lys Cys Ser Glu Asn Lys Leu Pro Ala Glu Leu Gln Glu Leu Pro
            100                 105                 110

Gly Leu Ser His Gln Tyr Trp Ser Ala Pro Ser Asp Lys Glu Gly Tyr
        115                 120                 125

Ser Gly Val Gly Leu Leu Ser Arg Gln Cys Pro Leu Lys Val Ser Tyr
    130                 135                 140

Gly Ile Ala Tyr Val Pro Asn Ala Gly Arg Gly Leu Val Arg Leu Glu
145                 150                 155                 160

Tyr Arg Gln Arg Trp Asp Glu Ala Phe Arg Lys Phe Leu Lys Gly Leu
                165                 170                 175

Ala Ser Arg Lys Pro Leu Val Leu Cys Gly Asp Leu Asn Val Ala His
            180                 185                 190

Glu Glu Ile Asp Leu Arg Asn Pro Lys Gly Asn Lys Lys Asn Ala Gly
        195                 200                 205

Phe Thr Pro Gln Glu Arg Gln Gly Phe Gly Glu Leu Leu Gln Ala Val
    210                 215                 220

Pro Leu Ala Asp Ser Phe Arg His Leu Tyr Pro Asn Thr Pro Tyr Ala
225                 230                 235                 240

Tyr Thr Phe Trp Thr Tyr Met Met Asn Ala Arg Ser Lys Asn Val Gly
                245                 250                 255
```

```
Trp Arg Leu Asp Tyr Phe Leu Leu Ser His Ser Leu Leu Pro Ala Leu
            260                 265                 270

Cys Asp Ser Lys Ile Arg Ser Lys Ala Leu Gly Ser Asp His Cys Pro
        275                 280                 285

Ile Thr Leu Tyr Leu Ala Leu
    290                 295
```

<210> 49
<211> 342
<212> PRT
<213> Homo sapiens

<400> 49

```
Met Pro Lys Arg Gly Lys Lys Gly Ala Val Ala Glu Asp Gly Asp Glu
  1               5                  10                  15

Leu Arg Thr Gly Lys Gly Met Lys Ser Ala Leu Leu Pro Arg Asn Cys
             20                  25                  30

Gly Gly Gly Val Cys His Ser Leu Asp Val Arg Glu Pro Glu Ala Lys
         35                  40                  45

Lys Ser Lys Thr Ala Ala Lys Lys Asn Asp Lys Glu Ala Ala Gly Glu
     50                  55                  60

Gly Pro Ala Leu Tyr Glu Asp Pro Pro Asp Gln Lys Thr Ser Pro Ser
 65                  70                  75                  80

Gly Lys Pro Ala Thr Leu Lys Ile Cys Ser Trp Asn Val Asp Gly Leu
                 85                  90                  95

Arg Ala Trp Ile Lys Lys Lys Gly Leu Asp Trp Val Lys Glu Glu Ala
            100                 105                 110

Pro Asp Ile Leu Cys Leu Gln Glu Thr Lys Cys Ser Glu Asn Lys Leu
        115                 120                 125

Pro Ala Glu Leu Gln Glu Leu Pro Gly Leu Ser His Gln Tyr Trp Ser
    130                 135                 140

Ala Pro Ser Asp Lys Glu Gly Tyr Ser Gly Val Gly Leu Leu Ser Arg
145                 150                 155                 160

Gln Cys Pro Leu Lys Val Ser Tyr Gly Ile Gly Asp Glu Glu His Asp
                165                 170                 175

Gln Glu Gly Arg Val Ile Val Ala Glu Phe Asp Ser Phe Val Leu Val
            180                 185                 190

Thr Ala Tyr Val Pro Asn Ala Gly Arg Gly Leu Val Arg Leu Glu Tyr
        195                 200                 205

Arg Gln Arg Trp Asp Glu Ala Phe Arg Lys Phe Leu Lys Gly Leu Ala
```

```
    210                 215                 220

Ser Arg Lys Pro Leu Val Leu Cys Gly Asp Leu Asn Val Ala His Glu
225                 230                 235                 240

Glu Ile Asp Leu Arg Asn Pro Lys Gly Asn Lys Lys Asn Ala Gly Phe
                245                 250                 255

Thr Pro Gln Glu Arg Gln Gly Phe Gly Glu Leu Leu Gln Ala Val Pro
            260                 265                 270

Leu Ala Asp Ser Phe Arg His Leu Tyr Pro Asn Thr Pro Tyr Ala Tyr
        275                 280                 285

Thr Phe Trp Thr Tyr Met Met Asn Ala Arg Ser Lys Asn Val Gly Trp
    290                 295                 300

Arg Leu Asp Tyr Phe Leu Leu Ser His Ser Leu Leu Pro Ala Leu Cys
305                 310                 315                 320

Asp Ser Lys Ile Arg Ser Lys Ala Leu Gly Ser Asp His Cys Pro Ile
                325                 330                 335

Thr Leu Tyr Leu Ala Leu
            340
```

<210> 50
<211> 305
<212> PRT
<213> Homo sapiens

<400> 50

```
Met Phe Gln Ala Ala Glu Arg Pro Gln Glu Trp Ala Met Glu Gly Pro
  1               5                  10                  15

Arg Asp Gly Leu Lys Lys Glu Arg Leu Leu Asp Asp Arg His Asp Ser
             20                  25                  30

Gly Leu Asp Ser Met Lys Asp Glu Glu Tyr Glu Gln Met Val Lys Glu
         35                  40                  45

Leu Gln Glu Ile Arg Leu Glu Pro Gln Glu Val Pro Arg Gly Ser Glu
     50                  55                  60

Pro Trp Lys Gln Gln Leu Thr Glu Asp Gly Asp Ser Phe Leu His Leu
 65                  70                  75                  80

Ala Ile Ile His Glu Glu Lys Ala Leu Thr Met Glu Val Ile Arg Gln
                 85                  90                  95

Val Lys Gly Asp Leu Ala Phe Leu Asn Phe Gln Asn Asn Leu Gln Gln
            100                 105                 110

Thr Pro Leu His Leu Ala Val Ile Thr Asn Gln Pro Glu Ile Ala Glu
        115                 120                 125
```

```
Ala Leu Leu Gly Ala Gly Cys Asp Pro Glu Leu Arg Asp Phe Arg Gly
    130                 135                 140

Asn Thr Pro Leu His Leu Ala Cys Glu Gln Gly Cys Leu Ala Ser Val
145                 150                 155                 160

Gly Val Leu Thr Gln Ser Cys Thr Thr Pro His Leu His Ser Ile Leu
                165                 170                 175

Lys Ala Thr Asn Tyr Asn Gly His Thr Cys Leu His Leu Ala Ser Ile
            180                 185                 190

His Gly Tyr Leu Gly Ile Val Glu Leu Leu Val Ser Leu Gly Ala Asp
        195                 200                 205

Val Asn Ala Gln Glu Pro Cys Asn Gly Arg Thr Ala Leu His Leu Ala
    210                 215                 220

Val Asp Leu Gln Asn Pro Asp Leu Val Ser Leu Leu Leu Lys Cys Gly
225                 230                 235                 240

Ala Asp Val Asn Arg Val Thr Tyr Gln Gly Tyr Ser Pro Tyr Gln Leu
                245                 250                 255

Thr Trp Gly Arg Pro Ser Thr Arg Ile Gln Gln Gln Leu Gly Gln Leu
            260                 265                 270

Thr Leu Glu Asn Leu Gln Met Leu Pro Glu Ser Glu Asp Glu Glu Ser
        275                 280                 285

Tyr Asp Thr Glu Ser Glu Phe Thr Glu Phe Thr Glu Asp Glu Val Ser
    290                 295                 300

Leu
305
```

<210> 51
<211> 289
<212> PRT
<213> Homo sapiens

<400> 51

```
Met Phe Gln Ala Ala Glu Arg Pro Gln Glu Trp Ala Met Glu Gly Pro
  1               5                  10                  15

Arg Asp Gly Leu Lys Lys Glu Arg Leu Leu Asp Asp Arg His Asp Ser
             20                  25                  30

Gly Leu Asp Ser Met Lys Asp Glu Glu Tyr Glu Gln Met Val Lys Glu
         35                  40                  45

Leu Gln Glu Ile Arg Leu Glu Pro Gln Glu Val Pro Arg Gly Ser Glu
     50                  55                  60
```

```
Pro Trp Lys Gln Gln Leu Thr Glu Asp Gly Asp Ser Phe Leu His Leu
 65                  70                  75                  80

Ala Ile Ile His Glu Glu Lys Ala Leu Thr Met Glu Val Ile Arg Gln
                 85                  90                  95

Val Lys Gly Asp Leu Ala Phe Leu Asn Phe Gln Asn Asn Leu Gln Gln
            100                 105                 110

Thr Pro Leu His Leu Ala Val Ile Thr Asn Gln Pro Glu Ile Ala Glu
        115                 120                 125

Ala Leu Leu Gly Ala Gly Cys Asp Pro Glu Leu Arg Asp Phe Arg Gly
    130                 135                 140

Asn Thr Pro Leu His Leu Ala Cys Glu Gln Gly Cys Leu Ala Ser Val
145                 150                 155                 160

Gly Val Leu Thr Gln Ser Cys Thr Thr Pro His Leu His Ser Ile Leu
                165                 170                 175

Lys Ala Thr Asn Tyr Asn Gly Gln Glu Pro Cys Asn Gly Arg Thr Ala
            180                 185                 190

Leu His Leu Ala Val Asp Leu Gln Asn Pro Asp Leu Val Ser Leu Leu
        195                 200                 205

Leu Lys Cys Gly Ala Asp Val Asn Arg Val Thr Tyr Gln Gly Tyr Ser
    210                 215                 220

Pro Tyr Gln Leu Thr Trp Gly Arg Pro Ser Thr Arg Ile Gln Gln Gln
225                 230                 235                 240

Leu Gly Gln Leu Thr Leu Glu Asn Leu Gln Met Leu Pro Glu Ser Glu
                245                 250                 255

Asp Glu Glu Ser Tyr Asp Thr Glu Ser Glu Phe Thr Glu Phe Thr Glu
            260                 265                 270

Asp Glu Leu Pro Tyr Asp Asp Cys Val Phe Gly Gly Gln Arg Leu Thr
        275                 280                 285

Leu
```

<210> 52
<211> 921
<212> PRT
<213> Homo sapiens

<400> 52

```
Met Ala Gly Ile Phe Tyr Phe Ala Leu Phe Ser Cys Leu Phe Gly Ile
  1               5                  10                  15

Cys Asp Ala Val Thr Gly Ser Arg Val Tyr Pro Ala Asn Glu Val Thr
```

```
            20                  25                  30

Leu Leu Asp Ser Arg Ser Val Gln Gly Glu Leu Gly Trp Ile Ala Ser
         35                  40                  45

Pro Leu Glu Gly Gly Trp Glu Glu Val Ser Ile Met Asp Glu Lys Asn
     50                  55                  60

Thr Pro Ile Arg Thr Tyr Gln Val Cys Asn Val Met Glu Pro Ser Gln
 65                  70                  75                  80

Asn Asn Trp Leu Arg Thr Asp Trp Ile Thr Arg Glu Gly Ala Gln Arg
                 85                  90                  95

Val Tyr Ile Glu Ile Lys Phe Thr Leu Arg Asp Cys Asn Ser Leu Pro
            100                 105                 110

Gly Val Met Gly Thr Cys Lys Glu Thr Phe Asn Leu Tyr Tyr Tyr Glu
        115                 120                 125

Ser Asp Asn Asp Lys Glu Arg Phe Ile Arg Glu Asn Gln Phe Val Lys
    130                 135                 140

Ile Asp Thr Ile Ala Ala Asp Glu Ser Phe Thr Gln Val Asp Ile Gly
145                 150                 155                 160

Asp Arg Ile Met Lys Leu Asn Thr Glu Ile Arg Asp Val Gly Pro Leu
                165                 170                 175

Ser Lys Lys Gly Phe Tyr Leu Ala Phe Gln Asp Val Gly Ala Cys Ile
            180                 185                 190

Ala Leu Val Ser Val Arg Val Phe Tyr Lys Lys Cys Pro Leu Thr Val
        195                 200                 205

Arg Asn Leu Ala Gln Phe Pro Asp Thr Ile Thr Gly Ala Asp Thr Ser
    210                 215                 220

Ser Leu Val Glu Val Arg Gly Ser Cys Val Asn Asn Ser Glu Glu Lys
225                 230                 235                 240

Asp Val Pro Lys Met Tyr Cys Gly Ala Asp Gly Glu Trp Leu Val Pro
                245                 250                 255

Ile Gly Asn Cys Leu Cys Asn Ala Gly His Glu Glu Arg Ser Gly Glu
            260                 265                 270

Cys Gln Ala Cys Lys Ile Gly Tyr Tyr Lys Ala Leu Ser Thr Asp Ala
        275                 280                 285

Thr Cys Ala Lys Cys Pro Pro His Ser Tyr Ser Val Trp Glu Gly Ala
    290                 295                 300

Thr Ser Cys Thr Cys Asp Arg Gly Phe Phe Arg Ala Asp Asn Asp Ala
305                 310                 315                 320

Ala Ser Met Pro Cys Thr Arg Pro Pro Ser Ala Pro Leu Asn Leu Ile
```

```
                325                 330                 335

Ser Asn Val Asn Glu Thr Ser Val Asn Leu Glu Trp Ser Ser Pro Gln
            340                 345                 350

Asn Thr Gly Gly Arg Gln Asp Ile Ser Tyr Asn Val Val Cys Lys Lys
        355                 360                 365

Cys Gly Ala Gly Asp Pro Ser Lys Cys Arg Pro Cys Gly Ser Gly Val
    370                 375                 380

His Tyr Thr Pro Gln Gln Asn Gly Leu Lys Thr Thr Lys Val Ser Ile
385                 390                 395                 400

Thr Asp Leu Leu Ala His Thr Asn Tyr Thr Phe Glu Ile Trp Ala Val
                405                 410                 415

Asn Gly Val Ser Lys Tyr Asn Pro Asn Pro Asp Gln Ser Val Ser Val
            420                 425                 430

Thr Val Thr Thr Asn Gln Ala Ala Pro Ser Ser Ile Ala Leu Val Gln
        435                 440                 445

Ala Lys Glu Val Thr Arg Tyr Ser Val Ala Leu Ala Trp Leu Glu Pro
    450                 455                 460

Asp Arg Pro Asn Gly Val Ile Leu Glu Tyr Glu Val Lys Tyr Tyr Glu
465                 470                 475                 480

Lys Asp Gln Asn Glu Arg Ser Tyr Arg Ile Val Arg Thr Ala Ala Arg
                485                 490                 495

Asn Thr Asp Ile Lys Gly Leu Asn Pro Leu Thr Ser Tyr Val Phe His
            500                 505                 510

Val Arg Ala Arg Thr Ala Ala Gly Tyr Gly Asp Phe Ser Glu Pro Leu
        515                 520                 525

Glu Val Thr Thr Asn Thr Val Pro Ser Arg Ile Ile Gly Asp Gly Ala
    530                 535                 540

Asn Ser Thr Val Leu Leu Val Ser Val Ser Gly Ser Val Val Leu Val
545                 550                 555                 560

Val Ile Leu Ile Ala Ala Phe Val Ile Ser Arg Arg Arg Ser Lys Tyr
                565                 570                 575

Ser Lys Ala Lys Gln Glu Ala Asp Glu Glu Lys His Leu Asn Gln Gly
            580                 585                 590

Val Arg Thr Tyr Val Asp Pro Phe Thr Tyr Glu Asp Pro Asn Gln Ala
        595                 600                 605

Val Arg Glu Phe Ala Lys Glu Ile Asp Ala Ser Cys Ile Lys Ile Glu
    610                 615                 620

Lys Val Ile Gly Val Gly Glu Phe Gly Glu Val Cys Ser Gly Arg Leu
```

625 630 635 640

Lys Val Pro Gly Lys Arg Glu Ile Cys Val Ala Ile Lys Thr Leu Lys
645 650 655

Ala Gly Tyr Thr Asp Lys Gln Arg Arg Asp Phe Leu Ser Glu Ala Ser
660 665 670

Ile Met Gly Gln Phe Asp His Pro Asn Ile Ile His Leu Glu Gly Val
675 680 685

Val Thr Lys Cys Lys Pro Val Met Ile Ile Thr Glu Tyr Met Glu Asn
690 695 700

Gly Ser Leu Asp Ala Phe Leu Arg Lys Asn Asp Gly Arg Phe Thr Val
705 710 715 720

Ile Gln Leu Val Gly Met Leu Arg Gly Ile Gly Ser Gly Met Lys Tyr
725 730 735

Leu Ser Asp Met Ser Tyr Val His Arg Asp Leu Ala Ala Arg Asn Ile
740 745 750

Leu Val Asn Ser Asn Leu Val Cys Lys Val Ser Asp Phe Gly Met Ser
755 760 765

Arg Val Leu Glu Asp Asp Pro Glu Ala Ala Tyr Thr Thr Arg Gly Gly
770 775 780

Lys Ile Pro Ile Arg Trp Thr Ala Pro Glu Ala Ile Ala Tyr Arg Lys
785 790 795 800

Phe Thr Ser Ala Ser Asp Val Trp Ser Tyr Gly Ile Val Met Trp Glu
805 810 815

Val Met Ser Tyr Gly Glu Arg Pro Tyr Trp Asp Met Ser Asn Gln Asp
820 825 830

Pro Asn Thr Ala Leu Leu Asp Pro Ser Ser Pro Glu Phe Ser Ala Val
835 840 845

Val Ser Val Gly Asp Trp Leu Gln Ala Ile Lys Met Asp Arg Tyr Lys
850 855 860

Asp Asn Phe Thr Ala Ala Gly Tyr Thr Thr Leu Glu Ala Val Val His
865 870 875 880

Val Asn Gln Glu Asp Leu Ala Arg Ile Gly Ile Thr Ala Ile Thr His
885 890 895

Gln Asn Lys Ile Leu Ser Ser Val Gln Ala Met Arg Thr Gln Met Gln
900 905 910

Gln Met His Gly Arg Met Val Pro Val
915 920

<210> 53
<211> 444
<212> PRT
<213> Homo sapiens

<400> 53
Met Asn Asp Phe Gly Ile Lys Asn Met Asp Gln Val Ala Pro Val Ala
1 5 10 15

Asn Ser Tyr Arg Gly Thr Leu Lys Arg Gln Pro Ala Phe Asp Thr Phe
20 25 30

Asp Gly Ser Leu Phe Ala Val Phe Pro Ser Leu Asn Glu Glu Gln Thr
35 40 45

Leu Gln Glu Val Pro Thr Gly Leu Asp Ser Ile Ser His Asp Ser Ala
50 55 60

Asn Cys Glu Leu Pro Leu Leu Thr Pro Cys Ser Lys Ala Val Met Ser
65 70 75 80

Gln Ala Leu Lys Ala Thr Phe Ser Gly Phe Phe Trp Ala Thr Asn Glu
85 90 95

Phe Ser Leu Val Asn Val Asn Leu Gln Arg Phe Gly Met Asn Gly Gln
100 105 110

Met Leu Cys Asn Leu Gly Lys Glu Arg Phe Leu Glu Leu Ala Pro Asp
115 120 125

Phe Val Gly Asp Ile Leu Trp Glu His Leu Glu Gln Met Ile Lys Glu
130 135 140

Asn Gln Glu Lys Thr Glu Asp Gln Tyr Glu Glu Asn Ser His Leu Thr
145 150 155 160

Ser Val Pro His Trp Ile Asn Ser Asn Thr Leu Gly Phe Gly Thr Glu
165 170 175

Gln Ala Pro Tyr Gly Met Gln Thr Gln Asn Tyr Pro Lys Gly Gly Leu
180 185 190

Leu Asp Ser Met Cys Pro Ala Ser Thr Pro Ser Val Leu Ser Ser Glu
195 200 205

Gln Glu Phe Gln Met Phe Pro Lys Ser Arg Leu Ser Ser Val Ser Val
210 215 220

Thr Tyr Cys Ser Val Ser Gln Asp Phe Pro Gly Ser Asn Leu Asn Leu
225 230 235 240

Leu Thr Asn Asn Ser Gly Thr Pro Lys Asp His Asp Ser Pro Glu Asn
245 250 255

Gly Ala Asp Ser Phe Glu Ser Ser Asp Ser Leu Leu Gln Ser Trp Asn
260 265 270

```
Ser Gln Ser Ser Leu Leu Asp Val Gln Arg Val Pro Ser Phe Glu Ser
        275                 280                 285

Phe Glu Asp Asp Cys Ser Gln Ser Leu Cys Leu Asn Lys Pro Thr Met
    290                 295                 300

Ser Phe Lys Asp Tyr Ile Gln Glu Arg Ser Asp Pro Val Glu Gln Gly
305                 310                 315                 320

Lys Pro Val Ile Pro Ala Ala Val Leu Ala Gly Phe Thr Gly Ser Gly
                325                 330                 335

Pro Ile Gln Leu Trp Gln Phe Leu Leu Glu Leu Leu Ser Asp Lys Ser
            340                 345                 350

Cys Gln Ser Phe Ile Ser Trp Thr Gly Asp Gly Trp Glu Phe Lys Leu
        355                 360                 365

Ala Asp Pro Asp Glu Val Ala Arg Arg Trp Gly Lys Arg Lys Asn Lys
    370                 375                 380

Pro Lys Met Asn Tyr Glu Lys Leu Ser Arg Gly Leu Arg Tyr Tyr Tyr
385                 390                 395                 400

Asp Lys Asn Ile Ile His Lys Thr Ser Gly Lys Arg Tyr Val Tyr Arg
                405                 410                 415

Phe Val Cys Asp Leu Gln Asn Leu Leu Gly Phe Thr Pro Glu Glu Leu
            420                 425                 430

His Ala Ile Leu Gly Val Gln Pro Asp Thr Glu Asp
        435                 440
```

<210> 54
<211> 260
<212> PRT
<213> Homo sapiens

<400> 54

```
Met Ala Gly Ser Ala Met Ser Ser Lys Phe Phe Leu Val Ala Leu Ala
  1               5                  10                  15

Ile Phe Phe Ser Phe Ala Gln Val Val Ile Glu Ala Asn Ser Trp Trp
             20                  25                  30

Ser Leu Gly Met Asn Asn Pro Val Gln Met Ser Glu Val Tyr Ile Ile
         35                  40                  45

Gly Ala Gln Pro Leu Cys Ser Gln Leu Ala Gly Leu Ser Gln Gly Gln
     50                  55                  60

Lys Lys Leu Cys His Leu Tyr Gln Asp His Met Gln Tyr Ile Gly Glu
 65                  70                  75                  80
```

```
Gly Ala Lys Thr Gly Ile Lys Glu Cys Gln Tyr Gln Phe Arg His Arg
                85                  90                  95

Arg Trp Asn Cys Ser Thr Val Asp Asn Thr Ser Val Phe Gly Arg Val
            100                 105                 110

Met Gln Ile Gly Ser Arg Glu Thr Ala Phe Thr Tyr Ala Val Ser Ala
        115                 120                 125

Ala Gly Val Val Asn Ala Met Ser Arg Ala Cys Arg Glu Gly Glu Leu
    130                 135                 140

Ser Thr Cys Gly Cys Ser Arg Ala Ala Arg Pro Lys Asp Leu Pro Arg
145                 150                 155                 160

Asp Trp Leu Trp Gly Gly Cys Gly Asp Asn Ile Asp Tyr Gly Tyr Arg
                165                 170                 175

Phe Ala Lys Glu Phe Val Asp Ala Arg Glu Arg Glu Arg Ile His Ala
            180                 185                 190

Lys Gly Ser Tyr Glu Ser Ala Arg Ile Leu Met Asn Leu His Asn Asn
        195                 200                 205

Glu Ala Gly Arg Arg Thr Val Tyr Asn Leu Ala Asp Val Ala Cys Lys
    210                 215                 220

Cys His Gly Val Ser Gly Ser Cys Ser Leu Lys Thr Cys Trp Leu Gln
225                 230                 235                 240

Leu Ala Asp Phe Arg Lys Val Gly Asp Ala Leu Lys Glu Lys Tyr Asp
                245                 250                 255

Thr Leu Val Gly
            260
```

<210> 55
<211> 719
<212> PRT
<213> Homo sapiens

<400> 55

```
Met Ala Leu Arg Arg Ser Met Gly Arg Pro Gly Leu Pro Pro Leu Pro
  1               5                  10                  15

Leu Pro Pro Pro Pro Arg Leu Gly Leu Leu Leu Ala Glu Ser Ala Ala
             20                  25                  30

Ala Gly Leu Lys Leu Met Gly Ala Pro Val Lys Leu Thr Val Ser Gln
         35                  40                  45

Gly Gln Pro Val Lys Leu Asn Cys Ser Val Glu Gly Met Glu Glu Pro
     50                  55                  60

Asp Ile Gln Trp Val Lys Asp Gly Ala Val Val Gln Asn Leu Asp Gln
```

65 70 75 80

Leu Tyr Ile Pro Val Ser Glu Gln His Trp Ile Gly Phe Leu Ser Leu
85 90 95

Lys Ser Val Glu Arg Ser Asp Ala Gly Arg Tyr Trp Cys Gln Val Glu
100 105 110

Asp Gly Gly Glu Thr Glu Ile Ser Gln Pro Val Trp Leu Thr Val Glu
115 120 125

Gly Val Pro Phe Phe Thr Val Glu Pro Lys Asp Leu Ala Val Pro Pro
130 135 140

Asn Ala Pro Phe Gln Leu Ser Cys Glu Ala Val Gly Pro Pro Glu Pro
145 150 155 160

Val Thr Ile Val Trp Trp Arg Gly Thr Thr Lys Ile Gly Gly Pro Ala
165 170 175

Pro Ser Pro Ser Val Leu Asn Val Thr Gly Val Thr Gln Ser Thr Met
180 185 190

Phe Ser Cys Glu Ala His Asn Leu Lys Gly Leu Ala Ser Ser Arg Thr
195 200 205

Ala Thr Val His Leu Gln Ala Leu Pro Ala Ala Pro Phe Asn Ile Thr
210 215 220

Val Thr Lys Leu Ser Ser Ser Asn Ala Ser Val Ala Trp Met Pro Gly
225 230 235 240

Ala Asp Gly Arg Ala Leu Leu Gln Ser Cys Thr Val Gln Val Thr Gln
245 250 255

Ala Pro Gly Gly Trp Glu Val Leu Ala Val Val Val Pro Val Pro Pro
260 265 270

Phe Thr Cys Leu Leu Arg Asp Leu Val Pro Ala Thr Asn Tyr Ser Leu
275 280 285

Arg Val Arg Cys Ala Asn Ala Leu Gly Pro Ser Pro Tyr Ala Asp Trp
290 295 300

Val Pro Phe Gln Thr Lys Gly Leu Ala Pro Ala Ser Ala Pro Gln Asn
305 310 315 320

Leu His Ala Ile Arg Thr Asp Ser Gly Leu Ile Leu Glu Trp Glu Glu
325 330 335

Val Ile Pro Glu Ala Pro Leu Glu Gly Pro Leu Gly Pro Tyr Lys Leu
340 345 350

Ser Trp Val Gln Asp Asn Gly Thr Gln Asp Glu Leu Thr Val Glu Gly
355 360 365

Thr Arg Ala Asn Leu Thr Gly Trp Asp Pro Gln Lys Asp Leu Ile Val

```
    370                 375                 380

Arg Val Cys Val Ser Asn Ala Val Gly Cys Gly Pro Trp Ser Gln Pro
385                 390                 395                 400

Leu Val Val Ser Ser His Asp Arg Ala Gly Gln Gln Gly Pro Pro His
                405                 410                 415

Ser Arg Thr Ser Trp Val Pro Val Val Leu Gly Val Leu Thr Ala Leu
            420                 425                 430

Val Thr Ala Ala Ala Leu Ala Leu Ile Leu Leu Arg Lys Arg Arg Lys
        435                 440                 445

Glu Thr Arg Phe Gly Gln Ala Phe Asp Ser Val Met Ala Arg Gly Glu
    450                 455                 460

Pro Ala Val His Phe Arg Ala Ala Arg Ser Phe Asn Arg Glu Arg Pro
465                 470                 475                 480

Glu Arg Ile Glu Ala Thr Leu Asp Ser Leu Gly Ile Ser Asp Glu Leu
                485                 490                 495

Lys Glu Lys Leu Glu Asp Val Leu Ile Pro Glu Gln Gln Phe Thr Leu
            500                 505                 510

Gly Arg Met Leu Gly Lys Gly Glu Phe Gly Ser Val Arg Glu Ala Gln
        515                 520                 525

Leu Lys Gln Glu Asp Gly Ser Phe Val Lys Val Ala Val Lys Met Leu
    530                 535                 540

Lys Ala Asp Ile Ile Ala Ser Ser Asp Ile Glu Glu Phe Leu Arg Glu
545                 550                 555                 560

Ala Ala Cys Met Lys Glu Phe Asp His Pro His Val Ala Lys Leu Val
                565                 570                 575

Gly Val Ser Leu Arg Ser Arg Ala Lys Gly Arg Leu Pro Ile Pro Met
            580                 585                 590

Val Ile Leu Pro Phe Met Lys His Gly Asp Leu His Ala Phe Leu Leu
        595                 600                 605

Ala Ser Arg Ile Gly Glu Asn Pro Phe Asn Leu Pro Leu Gln Thr Leu
    610                 615                 620

Ile Arg Phe Met Val Asp Ile Ala Cys Gly Met Glu Tyr Leu Ser Ser
625                 630                 635                 640

Arg Asn Phe Ile His Arg Asp Leu Ala Ala Arg Asn Cys Met Leu Ala
                645                 650                 655

Glu Asp Met Thr Val Cys Val Ala Asp Phe Gly Leu Ser Arg Lys Ile
            660                 665                 670

Tyr Ser Asp Cys Arg Tyr Ile Leu Thr Pro Gly Gly Leu Ala Glu Gln
```

675 680 685

Pro Gly Gln Ala Glu His Gln Pro Glu Ser Pro Leu Asn Glu Thr Gln
690 695 700

Arg Leu Leu Leu Leu Gln Gln Gly Leu Leu Pro His Ser Ser Cys
705 710 715

<210> 56
<211> 848
<212> PRT
<213> Homo sapiens

<400> 56
Met Cys Arg Ile Ala Gly Ala Leu Arg Thr Leu Leu Pro Leu Leu Ala
1 5 10 15

Ala Leu Leu Gln Ala Ser Val Glu Ala Ser Gly Glu Ile Ala Leu Cys
20 25 30

Lys Thr Gly Phe Pro Glu Asp Val Tyr Ser Ala Val Leu Ser Lys Asp
35 40 45

Val His Glu Gly Gln Pro Leu Leu Asn Val Lys Phe Ser Asn Cys Asn
50 55 60

Gly Lys Arg Lys Val Gln Tyr Glu Ser Ser Glu Pro Ala Asp Phe Lys
65 70 75 80

Val Asp Glu Asp Gly Met Val Tyr Ala Val Arg Ser Phe Pro Leu Ser
85 90 95

Ser Glu His Ala Lys Phe Leu Ile Tyr Ala Gln Asp Lys Glu Thr Gln
100 105 110

Glu Lys Trp Gln Val Ala Val Lys Leu Ser Leu Lys Pro Thr Leu Thr
115 120 125

Glu Glu Ser Val Lys Glu Ser Ala Glu Val Glu Glu Ile Val Phe Pro
130 135 140

Arg Gln Phe Ser Lys His Ser Gly His Leu Gln Arg Gln Lys Arg Asp
145 150 155 160

Trp Val Ile Pro Pro Ile Asn Leu Pro Glu Asn Ser Arg Gly Pro Phe
165 170 175

Pro Gln Glu Leu Val Arg Ile Arg Ser Asp Arg Asp Lys Asn Leu Ser
180 185 190

Leu Arg Tyr Ser Val Thr Gly Pro Gly Ala Asp Gln Pro Pro Thr Gly
195 200 205

Ile Phe Ile Ile Asn Pro Ile Ser Gly Gln Leu Ser Val Thr Lys Pro
210 215 220

```
Leu Asp Arg Glu Gln Ile Ala Arg Phe His Leu Arg Ala His Ala Val
225                 230                 235                 240

Asp Ile Asn Gly Asn Gln Val Glu Asn Pro Ile Asp Ile Val Ile Asn
                245                 250                 255

Val Ile Asp Met Asn Asp Asn Arg Pro Glu Phe Leu His Gln Val Trp
            260                 265                 270

Asn Gly Thr Val Pro Glu Gly Ser Lys Pro Gly Thr Tyr Val Met Thr
        275                 280                 285

Val Thr Ala Ile Asp Ala Asp Asp Pro Asn Ala Leu Asn Gly Met Leu
    290                 295                 300

Arg Tyr Arg Ile Val Ser Gln Ala Pro Ser Thr Pro Ser Pro Asn Met
305                 310                 315                 320

Phe Thr Ile Asn Asn Glu Thr Gly Asp Ile Ile Thr Val Ala Ala Gly
                325                 330                 335

Leu Asp Arg Glu Lys Val Gln Gln Tyr Thr Leu Ile Ile Gln Ala Thr
            340                 345                 350

Asp Met Glu Gly Asn Pro Thr Tyr Gly Leu Ser Asn Thr Ala Thr Ala
        355                 360                 365

Val Ile Thr Val Thr Asp Val Asn Asp Asn Pro Pro Glu Phe Thr Ala
    370                 375                 380

Met Thr Phe Tyr Gly Glu Val Pro Glu Asn Arg Val Asp Ile Ile Val
385                 390                 395                 400

Ala Asn Leu Thr Val Thr Asp Lys Asp Gln Pro His Thr Pro Ala Trp
                405                 410                 415

Asn Ala Val Tyr Arg Ile Ser Gly Gly Asp Pro Thr Gly Arg Phe Ala
            420                 425                 430

Ile Gln Thr Asp Pro Asn Ser Asn Asp Gly Leu Val Thr Val Val Lys
        435                 440                 445

Pro Ile Asp Phe Glu Thr Asn Arg Met Phe Val Leu Thr Val Ala Ala
    450                 455                 460

Glu Asn Gln Val Pro Leu Ala Lys Gly Ile Gln His Pro Pro Gln Ser
465                 470                 475                 480

Thr Ala Thr Val Ser Val Thr Val Ile Asp Val Asn Glu Asn Pro Tyr
                485                 490                 495

Phe Ala Pro Asn Pro Lys Ile Ile Arg Gln Glu Glu Gly Leu His Ala
            500                 505                 510

Gly Thr Met Leu Thr Thr Phe Thr Ala Gln Asp Pro Asp Arg Tyr Met
        515                 520                 525
```

```
Gln Gln Asn Ile Arg Tyr Thr Lys Leu Ser Asp Pro Ala Asn Trp Leu
    530                 535                 540

Lys Ile Asp Pro Val Asn Gly Gln Ile Thr Thr Ile Ala Val Leu Asp
545                 550                 555                 560

Arg Glu Ser Pro Asn Val Lys Asn Asn Ile Tyr Asn Ala Thr Phe Leu
                565                 570                 575

Ala Ser Asp Asn Gly Ile Pro Pro Met Ser Gly Thr Gly Thr Leu Gln
            580                 585                 590

Ile Tyr Leu Leu Asp Ile Asn Asp Asn Ala Pro Gln Val Leu Pro Gln
        595                 600                 605

Glu Ala Glu Thr Cys Glu Thr Pro Asp Pro Asn Ser Ile Asn Ile Thr
    610                 615                 620

Ala Leu Asp Tyr Asp Ile Asp Pro Asn Ala Gly Pro Phe Ala Phe Asp
625                 630                 635                 640

Leu Pro Leu Ser Pro Val Thr Ile Lys Arg Asn Trp Thr Ile Thr Arg
                645                 650                 655

Leu Asn Gly Asp Phe Ala Gln Leu Asn Leu Lys Ile Lys Phe Leu Glu
            660                 665                 670

Ala Gly Ile Tyr Glu Val Pro Ile Ile Ile Thr Asp Ser Gly Asn Pro
        675                 680                 685

Pro Lys Ser Asn Ile Ser Ile Leu Arg Val Lys Val Cys Gln Cys Asp
    690                 695                 700

Ser Asn Gly Asp Cys Thr Asp Val Asp Arg Ile Val Gly Ala Gly Leu
705                 710                 715                 720

Gly Thr Gly Ala Ile Ile Ala Ile Leu Leu Cys Ile Ile Ile Leu Leu
                725                 730                 735

Ile Leu Val Leu Met Phe Val Val Trp Met Lys Arg Arg Asp Lys Glu
            740                 745                 750

Arg Gln Ala Lys Gln Leu Leu Ile Asp Pro Glu Asp Asp Val Arg Asp
        755                 760                 765

Asn Ile Leu Lys Tyr Asp Glu Glu Gly Gly Gly Glu Glu Asp Gln Asp
    770                 775                 780

Tyr Asp Leu Ser Gln Leu Gln Gln Pro Asp Thr Val Glu Pro Asp Ala
785                 790                 795                 800

Ile Lys Pro Val Gly Ile Arg Arg Met Asp Glu Arg Pro Ile His Ala
                805                 810                 815

Glu Pro Gln Tyr Pro Val Arg Ser Ala Ala Pro His Pro Gly Asp Ile
            820                 825                 830
```

```
Gly Asp Phe Ile Asn Glu Lys Thr Trp Pro Ile Gln Ser Leu His Leu
        835                 840                 845
```

<210> 57
<211> 103
<212> PRT
<213> Homo sapiens

<400> 57

```
Met Glu Arg Val Lys Met Ile Asn Val Gln Arg Leu Leu Glu Ala Ala
  1               5                  10                  15

Glu Phe Leu Glu Arg Arg Glu Arg Glu Cys Glu His Gly Tyr Ala Ser
             20                  25                  30

Ser Phe Pro Ser Met Pro Ser Pro Arg Leu Gln His Ser Lys Pro Pro
         35                  40                  45

Arg Arg Leu Ser Arg Ala Gln Lys His Ser Ser Gly Ser Ser Asn Thr
     50                  55                  60

Ser Thr Ala Asn Arg Ser Thr His Asn Glu Leu Glu Lys Asn Arg Leu
 65                  70                  75                  80

Lys Asn Trp Leu Val Gly Arg Arg Asp Thr Arg Gly Met Lys Met Leu
                 85                  90                  95

Leu Lys Ala Ile Ala Val Ile
            100
```

<210> 58
<211> 234
<212> PRT
<213> Homo sapiens

<400> 58

```
Met Glu Lys His Ile Asn Thr Phe Leu Gln Asn Val Gln Ile Leu Leu
  1               5                  10                  15

Glu Ala Ala Ser Tyr Leu Glu Gln Ile Glu Lys Glu Asn Lys Lys Cys
             20                  25                  30

Glu His Gly Tyr Ala Ser Ser Phe Pro Ser Met Pro Ser Pro Arg Leu
         35                  40                  45

Gln His Ser Lys Pro Pro Arg Arg Leu Ser Arg Ala Gln Lys His Ser
     50                  55                  60

Ser Gly Ser Ser Asn Thr Ser Thr Ala Asn Arg Ser Thr His Asn Glu
```

```
 65                  70                  75                  80

Leu Glu Lys Asn Arg Arg Ala His Leu Arg Leu Cys Leu Glu Arg Leu
                85                  90                  95

Lys Val Leu Ile Pro Leu Gly Pro Asp Cys Thr Arg His Thr Thr Leu
            100                 105                 110

Gly Leu Leu Asn Lys Ala Lys Ala His Ile Lys Lys Leu Glu Glu Ala
        115                 120                 125

Glu Arg Lys Ser Gln His Gln Leu Glu Asn Leu Glu Arg Glu Gln Arg
    130                 135                 140

Phe Leu Lys Trp Arg Leu Glu Gln Leu Gln Gly Pro Gln Glu Met Glu
145                 150                 155                 160

Arg Ile Arg Met Asp Ser Ile Gly Ser Thr Ile Ser Ser Asp Arg Ser
                165                 170                 175

Asp Ser Glu Arg Glu Glu Ile Glu Val Asp Val Glu Ser Thr Glu Phe
            180                 185                 190

Ser His Gly Glu Val Asp Asn Ile Ser Thr Thr Ser Ile Ser Asp Ile
        195                 200                 205

Asp Asp His Ser Ser Leu Pro Ser Ile Gly Ser Asp Glu Gly Tyr Ser
    210                 215                 220

Ser Ala Ser Val Lys Leu Ser Phe Thr Ser
225                 230
```

<210> 59
<211> 329
<212> PRT
<213> Homo sapiens

<400> 59

```
Met Glu Ser Pro Ala Ser Ser Gln Pro Ala Ser Met Pro Gln Ser Lys
  1               5                  10                  15

Gly Lys Ser Lys Arg Lys Lys Asp Leu Arg Ile Ser Cys Met Ser Lys
             20                  25                  30

Pro Pro Ala Pro Asn Pro Thr Pro Pro Arg Asn Leu Asp Ser Arg Thr
         35                  40                  45

Phe Ile Thr Ile Gly Asp Arg Asn Phe Glu Val Glu Ala Asp Asp Leu
     50                  55                  60

Val Thr Ile Ser Glu Leu Gly Arg Gly Ala Tyr Gly Val Val Glu Lys
 65                  70                  75                  80

Val Arg His Ala Gln Ser Gly Thr Ile Met Ala Val Lys Arg Ile Arg
                85                  90                  95
```

```
Ala Thr Val Asn Ser Gln Glu Gln Lys Arg Leu Leu Met Asp Leu Asp
            100                 105                 110

Ile Asn Met Arg Thr Val Asp Cys Phe Tyr Thr Val Thr Phe Tyr Gly
        115                 120                 125

Ala Leu Phe Arg Glu Gly Asp Val Trp Ile Cys Met Glu Leu Met Asp
    130                 135                 140

Thr Ser Leu Asp Lys Phe Tyr Arg Lys Val Leu Asp Lys Asn Met Thr
145                 150                 155                 160

Ile Pro Glu Asp Ile Leu Gly Glu Ile Ala Val Ser Ile Val Arg Ala
                165                 170                 175

Leu Glu His Leu His Ser Lys Leu Ser Val Ile His Arg Asp Val Lys
            180                 185                 190

Pro Ser Asn Val Leu Ile Asn Lys Glu Gly His Val Lys Met Cys Asp
        195                 200                 205

Phe Gly Ile Ser Gly Tyr Leu Val Asp Ser Val Ala Lys Thr Met Asp
    210                 215                 220

Ala Gly Cys Lys Pro Tyr Met Ala Pro Glu Arg Ile Asn Pro Glu Leu
225                 230                 235                 240

Asn Gln Lys Gly Tyr Asn Val Lys Ser Asp Val Trp Ser Leu Gly Ile
                245                 250                 255

Thr Met Ile Glu Met Ala Ile Leu Arg Phe Pro Tyr Glu Ser Trp Gly
            260                 265                 270

Thr Pro Phe Gln Gln Leu Lys Gln Val Val Glu Glu Pro Ser Pro Gln
        275                 280                 285

Leu Pro Ala Asp Arg Phe Ser Pro Glu Phe Val Asp Phe Thr Ala Gln
    290                 295                 300

Cys Leu Arg Lys Asn Pro Ala Glu Arg Met Ser Tyr Leu Glu Leu Ile
305                 310                 315                 320

Gly Ala Asp Arg Phe Ser Pro Thr Pro
                325
```

<210> 60
<211> 292
<212> PRT
<213> Homo sapiens

<400> 60

```
Met Pro Glu Ile Arg Leu Arg His Val Val Ser Cys Ser Ser Gln Asp
  1               5                  10                  15
```

```
Ser Thr His Cys Ala Glu Asn Leu Leu Lys Ala Asp Thr Tyr Arg Lys
            20                  25                  30

Trp Arg Ala Ala Lys Ala Gly Glu Lys Thr Ile Ser Val Val Leu Gln
        35                  40                  45

Leu Glu Lys Glu Glu Gln Ile His Ser Val Asp Ile Gly Asn Asp Gly
    50                  55                  60

Ser Ala Phe Val Glu Val Leu Val Gly Ser Ser Ala Gly Gly Ala Gly
65                  70                  75                  80

Glu Gln Asp Tyr Glu Val Leu Leu Val Thr Ser Ser Phe Met Ser Pro
                85                  90                  95

Ser Glu Ser Arg Ser Gly Ser Asn Pro Asn Arg Val Arg Met Phe Gly
            100                 105                 110

Pro Asp Lys Leu Val Arg Ala Ala Ala Glu Lys Arg Trp Asp Arg Val
        115                 120                 125

Lys Ile Val Cys Ser Gln Pro Tyr Ser Lys Asp Ser Pro Phe Gly Leu
    130                 135                 140

Ser Phe Val Arg Phe His Ser Pro Pro Asp Lys Asp Glu Ala Glu Ala
145                 150                 155                 160

Pro Ser Gln Lys Val Thr Val Thr Lys Leu Gly Gln Phe Arg Val Lys
                165                 170                 175

Glu Glu Asp Glu Ser Ala Asn Ser Leu Arg Pro Gly Ala Leu Phe Phe
            180                 185                 190

Ser Arg Ile Asn Lys Thr Ser Pro Val Thr Ala Ser Asp Pro Ala Gly
        195                 200                 205

Pro Ser Tyr Ala Ala Ala Thr Leu Gln Ala Ser Ser Ala Ala Ser Ser
    210                 215                 220

Ala Ser Pro Val Ser Arg Ala Ile Gly Ser Thr Ser Lys Pro Gln Glu
225                 230                 235                 240

Ser Pro Trp His Ser Phe Val Pro Asp Gly Ser Thr Val Ala Met Arg
                245                 250                 255

Ser Arg Ser Tyr Phe Leu Thr Ser Ser Met Gly Trp Cys Arg Lys Pro
            260                 265                 270

Glu Val Cys Ala Ile His Thr His Thr His Thr His Thr His Thr His
        275                 280                 285

Thr Arg Cys Ile
    290
```

<210> 61

<211> 266
<212> PRT
<213> Homo sapiens

<400> 61

```
Met Pro Glu Ile Arg Leu Arg His Val Val Ser Cys Ser Ser Gln Asp
  1               5                  10                  15

Ser Thr His Cys Ala Glu Asn Leu Leu Lys Ala Asp Thr Tyr Arg Lys
             20                  25                  30

Trp Arg Ala Ala Lys Ala Gly Glu Lys Thr Ile Ser Val Val Leu Gln
         35                  40                  45

Leu Glu Lys Glu Glu Gln Ile His Ser Val Asp Ile Gly Asn Asp Gly
     50                  55                  60

Ser Ala Phe Val Glu Val Leu Val Gly Ser Ser Ala Gly Gly Ala Gly
 65                  70                  75                  80

Glu Gln Asp Tyr Glu Val Leu Leu Val Thr Ser Ser Phe Met Ser Pro
                 85                  90                  95

Ser Glu Ser Arg Ser Gly Ser Asn Pro Asn Arg Val Arg Met Phe Gly
            100                 105                 110

Pro Asp Lys Leu Val Arg Ala Ala Ala Glu Lys Arg Trp Asp Arg Val
        115                 120                 125

Lys Ile Val Cys Ser Gln Pro Tyr Ser Lys Asp Ser Pro Phe Gly Leu
    130                 135                 140

Ser Phe Val Arg Phe His Ser Pro Pro Asp Lys Asp Glu Ala Glu Ala
145                 150                 155                 160

Pro Ser Gln Lys Val Thr Val Thr Lys Leu Gly Gln Phe Arg Val Lys
                165                 170                 175

Glu Glu Asp Glu Ser Ala Asn Ser Leu Arg Pro Gly Ala Leu Phe Phe
            180                 185                 190

Ser Arg Ile Asn Lys Thr Ser Pro Val Thr Ala Ser Asp Pro Ala Gly
        195                 200                 205

Pro Ser Tyr Ala Ala Ala Thr Leu Gln Ala Ser Ser Ala Ala Ser Ser
    210                 215                 220

Ala Ser Pro Val Ser Arg Ala Ile Gly Ser Thr Ser Lys Pro Gln Glu
225                 230                 235                 240

Ser Ser Asp Phe Gly Gly Val Glu Glu Glu Arg Ser Trp Arg Pro Gln
                245                 250                 255

Ser Ile Pro Ile Pro Ser Ala Pro Gly Ser
            260                 265
```

<210> 62
<211> 247
<212> PRT
<213> Homo sapiens

<400> 62
Met Pro Glu Ile Arg Leu Arg His Val Val Ser Cys Ser Ser Gln Asp
1 5 10 15

Ser Thr His Cys Ala Glu Asn Leu Leu Lys Ala Asp Thr Tyr Arg Lys
20 25 30

Trp Arg Ala Ala Lys Ala Gly Glu Lys Thr Ile Ser Val Val Leu Gln
35 40 45

Leu Glu Lys Glu Glu Gln Ile His Ser Val Asp Ile Gly Asn Asp Gly
50 55 60

Ser Ala Phe Val Glu Val Leu Val Gly Ser Ser Ala Gly Gly Ala Gly
65 70 75 80

Glu Gln Asp Tyr Glu Val Leu Leu Val Thr Ser Ser Phe Met Ser Pro
85 90 95

Ser Glu Ser Arg Ser Gly Ser Asn Pro Asn Arg Val Arg Met Phe Gly
100 105 110

Pro Asp Lys Leu Val Arg Ala Ala Ala Glu Lys Arg Trp Asp Arg Val
115 120 125

Lys Ile Val Cys Ser Gln Pro Tyr Ser Lys Asp Ser Pro Phe Gly Leu
130 135 140

Ser Phe Val Arg Phe His Ser Pro Pro Asp Lys Asp Glu Ala Glu Ala
145 150 155 160

Pro Ser Gln Lys Val Thr Val Thr Lys Leu Gly Gln Phe Arg Val Lys
165 170 175

Glu Glu Asp Glu Ser Ala Asn Ser Leu Arg Leu Glu Asp Tyr Met Ser
180 185 190

Asp Arg Val Gln Phe Val Ile Thr Ala Gln Glu Trp Asp Pro Ser Phe
195 200 205

Glu Glu Ala Leu Met Asp Asn Pro Ser Leu Ala Phe Val Arg Pro Arg
210 215 220

Trp Ile Tyr Ser Cys Asn Glu Lys Gln Lys Leu Leu Pro His Gln Leu
225 230 235 240

Tyr Gly Val Val Pro Gln Ala
245

<210> 63
<211> 624
<212> PRT
<213> Homo sapiens

<400> 63
Met Pro Glu Ile Arg Leu Arg His Val Val Ser Cys Ser Ser Gln Asp
1 5 10 15

Ser Thr His Cys Ala Glu Asn Leu Leu Lys Ala Asp Thr Tyr Arg Lys
20 25 30

Trp Arg Ala Ala Lys Ala Gly Glu Lys Thr Ile Ser Val Val Leu Gln
35 40 45

Leu Glu Lys Glu Glu Gln Ile His Ser Val Asp Ile Gly Asn Asp Gly
50 55 60

Ser Ala Phe Val Glu Val Leu Val Gly Ser Ser Ala Gly Gly Ala Gly
65 70 75 80

Glu Gln Asp Tyr Glu Val Leu Leu Val Thr Ser Ser Phe Met Ser Pro
85 90 95

Ser Glu Ser Arg Ser Gly Ser Asn Pro Asn Arg Val Arg Met Phe Gly
100 105 110

Pro Asp Lys Leu Val Arg Ala Ala Ala Glu Lys Arg Trp Asp Arg Val
115 120 125

Lys Ile Val Cys Ser Gln Pro Tyr Ser Lys Asp Ser Pro Phe Gly Leu
130 135 140

Ser Phe Val Arg Phe His Ser Pro Pro Asp Lys Asp Glu Ala Glu Ala
145 150 155 160

Pro Ser Gln Lys Val Thr Val Thr Lys Leu Gly Gln Phe Arg Val Lys
165 170 175

Glu Glu Asp Glu Ser Ala Asn Ser Leu Arg Pro Gly Ala Leu Phe Phe
180 185 190

Ser Arg Ile Asn Lys Thr Ser Pro Val Thr Ala Ser Asp Pro Ala Gly
195 200 205

Pro Ser Tyr Ala Ala Ala Thr Leu Gln Ala Ser Ser Ala Ala Ser Ser
210 215 220

Ala Ser Pro Val Ser Arg Ala Ile Gly Ser Thr Ser Lys Pro Gln Glu
225 230 235 240

Ser Pro Lys Gly Lys Arg Lys Leu Asp Leu Asn Gln Glu Glu Lys Lys
245 250 255

Thr Pro Ser Lys Pro Pro Ala Gln Leu Ser Pro Ser Val Pro Lys Arg
260 265 270

```
Pro Lys Leu Pro Ala Pro Thr Arg Thr Pro Ala Thr Ala Pro Val Pro
        275                 280                 285

Ala Arg Ala Gln Gly Ala Val Thr Gly Lys Pro Arg Gly Glu Gly Thr
    290                 295                 300

Glu Pro Arg Arg Pro Arg Ala Gly Pro Glu Glu Leu Gly Lys Ile Leu
305                 310                 315                 320

Gln Gly Val Val Val Val Leu Ser Gly Phe Gln Asn Pro Phe Arg Ser
                325                 330                 335

Glu Leu Arg Asp Lys Ala Leu Glu Leu Gly Ala Lys Tyr Arg Pro Asp
            340                 345                 350

Trp Thr Arg Asp Ser Thr His Leu Ile Cys Ala Phe Ala Asn Thr Pro
        355                 360                 365

Lys Tyr Ser Gln Val Leu Gly Leu Gly Gly Arg Ile Val Arg Lys Glu
    370                 375                 380

Trp Val Leu Asp Cys His Arg Met Arg Arg Arg Leu Pro Ser Arg Arg
385                 390                 395                 400

Tyr Leu Met Ala Gly Pro Gly Ser Ser Ser Glu Glu Asp Glu Ala Ser
                405                 410                 415

His Ser Gly Gly Ser Gly Asp Glu Ala Pro Lys Leu Pro Gln Lys Gln
            420                 425                 430

Pro Gln Thr Lys Thr Lys Pro Thr Gln Ala Ala Gly Pro Ser Ser Pro
        435                 440                 445

Gln Lys Pro Pro Thr Pro Glu Glu Thr Lys Ala Ala Ser Pro Val Leu
    450                 455                 460

Gln Glu Asp Ile Asp Ile Glu Gly Val Gln Ser Glu Gly Gln Asp Asn
465                 470                 475                 480

Gly Ala Glu Asp Ser Gly Asp Thr Glu Asp Glu Leu Arg Arg Val Ala
                485                 490                 495

Glu Gln Lys Glu His Arg Leu Pro Pro Gly Gln Glu Glu Asn Gly Glu
            500                 505                 510

Asp Pro Tyr Ala Gly Ser Thr Asp Glu Asn Thr Asp Ser Glu Glu His
        515                 520                 525

Gln Glu Pro Pro Asp Leu Pro Val Pro Glu Leu Pro Arg Phe Leu Pro
    530                 535                 540

Gly Gln Ala Leu Leu Ser Leu Arg Gly Val Pro Trp Gly Arg Ala Ala
545                 550                 555                 560

Glu Thr His Pro Ile Arg His Ser Leu Gln Trp Gly Ala Pro Trp His
                565                 570                 575
```

```
Ser Phe Val Pro Asp Gly Ser Thr Val Ala Met Arg Ser Arg Ser Tyr
            580                 585                 590

Phe Leu Thr Ser Ser Met Gly Trp Cys Arg Lys Pro Glu Val Cys Ala
        595                 600                 605

Ile His Thr His Thr His Thr His Thr His Thr His Thr Arg Cys Ile
    610                 615                 620
```

<210> 64
<211> 567
<212> PRT
<213> Homo sapiens

<400> 64

```
Met Ala Gly Ala Ile Ala Ser Arg Met Ser Phe Ser Ser Leu Lys Arg
  1               5                  10                  15

Lys Gln Pro Lys Thr Phe Thr Val Arg Ile Val Thr Met Asp Ala Glu
             20                  25                  30

Met Glu Phe Asn Cys Glu Met Lys Trp Lys Gly Lys Asp Leu Phe Asp
         35                  40                  45

Leu Val Cys Arg Thr Leu Gly Leu Arg Glu Thr Trp Phe Phe Gly Leu
     50                  55                  60

Gln Tyr Thr Ile Lys Asp Thr Val Ala Trp Leu Lys Met Asp Lys Lys
 65                  70                  75                  80

Val Leu Asp His Asp Val Ser Lys Glu Glu Pro Val Thr Phe His Phe
                 85                  90                  95

Leu Ala Lys Phe Tyr Pro Glu Asn Ala Glu Glu Glu Leu Val Gln Glu
            100                 105                 110

Ile Thr Gln His Leu Phe Phe Leu Gln Val Lys Lys Gln Ile Leu Asp
        115                 120                 125

Glu Lys Ile Tyr Cys Pro Pro Glu Ala Ser Val Leu Leu Ala Ser Tyr
    130                 135                 140

Ala Val Gln Ala Lys Tyr Gly Asp Tyr Asp Pro Ser Val His Lys Arg
145                 150                 155                 160

Gly Phe Leu Ala Gln Glu Glu Leu Leu Pro Lys Arg Val Ile Asn Leu
                165                 170                 175

Tyr Gln Met Thr Pro Glu Met Trp Glu Glu Arg Ile Thr Ala Trp Tyr
            180                 185                 190

Ala Glu His Arg Gly Arg Ala Arg Asp Glu Ala Glu Met Glu Tyr Leu
```

```
        195                 200                 205

Lys Ile Ala Gln Asp Leu Glu Met Tyr Gly Val Asn Tyr Phe Ala Ile
    210                 215                 220

Arg Asn Lys Lys Gly Thr Glu Leu Leu Leu Gly Val Asp Ala Leu Gly
225                 230                 235                 240

Leu His Ile Tyr Asp Pro Glu Asn Arg Leu Thr Pro Lys Ile Ser Phe
                245                 250                 255

Pro Trp Lys Asn Glu Ile Arg Asn Ile Ser Tyr Ser Asp Lys Glu Phe
            260                 265                 270

Thr Ile Lys Pro Leu Asp Lys Lys Ile Asp Val Phe Lys Phe Asn Ser
        275                 280                 285

Ser Lys Leu Arg Val Asn Lys Leu Ile Leu Gln Leu Cys Ile Gly Asn
    290                 295                 300

His Asp Leu Phe Met Arg Arg Arg Lys Ala Asp Ser Leu Glu Val Gln
305                 310                 315                 320

Gln Met Lys Ala Gln Ala Arg Glu Glu Lys Ala Arg Lys Gln Met Lys
                325                 330                 335

Glu Glu Ala Thr Met Ala Asn Glu Ala Leu Met Arg Ser Glu Glu Thr
            340                 345                 350

Ala Asp Leu Leu Ala Glu Lys Ala Gln Ile Thr Glu Glu Glu Ala Lys
        355                 360                 365

Leu Leu Ala Gln Lys Ala Ala Glu Ala Glu Gln Glu Met Gln Arg Ile
    370                 375                 380

Lys Ala Thr Ala Ile Arg Thr Glu Glu Glu Lys Arg Leu Met Glu Gln
385                 390                 395                 400

Lys Val Leu Glu Ala Glu Val Leu Ala Leu Lys Met Ala Glu Glu Ser
                405                 410                 415

Glu Arg Arg Ala Lys Glu Ala Asp Gln Leu Lys Gln Asp Leu Gln Glu
            420                 425                 430

Ala Arg Glu Ala Glu Arg Arg Ala Lys Gln Lys Leu Leu Glu Ile Ala
        435                 440                 445

Thr Lys Pro Thr Tyr Pro Pro Met Asn Pro Ile Pro Ala Pro Leu Pro
    450                 455                 460

Pro Asp Ile Pro Ser Phe Asn Leu Ile Gly Asp Ser Leu Ser Phe Asp
465                 470                 475                 480

Phe Lys Asp Thr Asp Met Lys Arg Leu Ser Met Glu Ile Glu Lys Glu
                485                 490                 495

Lys Val Glu Tyr Met Glu Lys Ser Lys His Leu Gln Glu Gln Leu Asn
```

```
            500                 505                 510

Glu Leu Lys Thr Glu Ile Glu Ala Leu Lys Leu Lys Glu Arg Glu Thr
        515                 520                 525

Ala Leu Asp Ile Leu His Asn Glu Asn Ser Asp Arg Gly Gly Ser Ser
    530                 535                 540

Lys His Asn Thr Ile Lys Lys Leu Thr Leu Gln Ser Ala Lys Ser Arg
545                 550                 555                 560

Val Ala Phe Phe Glu Glu Leu
                565
```

<210> 65
<211> 134
<212> PRT
<213> Homo sapiens

<400> 65

```
Met Arg Glu Arg Phe Asp Arg Phe Leu His Glu Lys Asn Cys Met Thr
  1               5                  10                  15

Asp Leu Leu Ala Lys Leu Glu Ala Lys Thr Gly Val Asn Arg Ser Phe
             20                  25                  30

Ile Ala Leu Gly Val Ile Gly Leu Val Ala Leu Tyr Leu Val Phe Gly
         35                  40                  45

Tyr Gly Ala Ser Leu Leu Cys Asn Leu Ile Gly Phe Gly Tyr Pro Ala
     50                  55                  60

Tyr Ile Ser Ile Lys Ala Ile Glu Ser Pro Asn Lys Glu Asp Asp Thr
 65                  70                  75                  80

Gln Trp Leu Thr Tyr Trp Val Val Tyr Gly Val Phe Ser Ile Ala Glu
                 85                  90                  95

Phe Phe Ser Asp Ile Phe Leu Ser Trp Phe Pro Phe Tyr Tyr Met Leu
            100                 105                 110

Lys Gln Ile Tyr Leu Glu Pro Pro Cys Ala Arg Phe Cys Ser Thr Ser
        115                 120                 125

Gly Arg Tyr Phe Gly Glu
    130
```

<210> 66
<211> 1278
<212> PRT
<213> Homo sapiens

<400> 66

```
Met Asp Leu Glu Gly Asp Arg Asn Gly Gly Ala Lys Lys Lys Asn Phe
 1               5                  10                  15

Phe Lys Leu Asn Asn Lys Ser Glu Lys Asp Lys Lys Glu Lys Lys Pro
            20                  25                  30

Thr Val Ser Val Phe Ser Met Phe Arg Tyr Ser Asn Trp Leu Asp Lys
        35                  40                  45

Leu Tyr Met Val Val Gly Thr Leu Ala Ala Ile Ile His Gly Ala Gly
    50                  55                  60

Leu Pro Leu Met Met Leu Val Phe Gly Glu Met Thr Asp Ile Phe Ala
65                  70                  75                  80

Asn Ala Gly Asn Leu Glu Asp Leu Met Ser Asn Ile Thr Asn Arg Ser
                85                  90                  95

Asp Ile Asn Asp Thr Gly Phe Phe Met Asn Leu Glu Glu Asp Met Thr
            100                 105                 110

Arg Tyr Ala Tyr Tyr Tyr Ser Gly Ile Gly Ala Gly Val Leu Val Ala
        115                 120                 125

Ala Tyr Ile Gln Val Ser Phe Trp Cys Leu Ala Ala Gly Arg Gln Ile
    130                 135                 140

His Lys Ile Arg Lys Gln Phe Phe His Ala Ile Met Arg Gln Glu Ile
145                 150                 155                 160

Gly Trp Phe Asp Val His Asp Val Gly Glu Leu Asn Thr Arg Leu Thr
                165                 170                 175

Asp Asp Val Ser Lys Ile Asn Glu Val Ile Gly Asp Lys Ile Gly Met
            180                 185                 190

Phe Phe Gln Ser Met Ala Thr Phe Phe Thr Gly Phe Ile Val Gly Phe
        195                 200                 205

Thr Arg Gly Trp Lys Leu Thr Leu Val Ile Leu Ala Ile Ser Pro Val
    210                 215                 220

Leu Gly Leu Ser Ala Ala Val Trp Ala Lys Ile Leu Ser Ser Phe Thr
225                 230                 235                 240

Asp Lys Glu Leu Leu Ala Tyr Ala Lys Ala Gly Ala Val Ala Glu Glu
                245                 250                 255

Val Leu Ala Ala Ile Arg Thr Val Ile Ala Phe Gly Gly Gln Lys Lys
            260                 265                 270

Glu Leu Glu Arg Tyr Asn Lys Asn Leu Glu Glu Ala Lys Arg Ile Gly
        275                 280                 285

Ile Lys Lys Ala Ile Thr Ala Asn Ile Ser Ile Gly Ala Ala Phe Leu
    290                 295                 300
```

```
Leu Ile Tyr Ala Ser Tyr Ala Leu Ala Phe Trp Tyr Gly Thr Thr Leu
305                 310                 315                 320

Val Leu Ser Gly Glu Tyr Ser Ile Gly Gln Val Leu Thr Val Phe Phe
                325                 330                 335

Ser Val Leu Ile Gly Ala Phe Ser Val Gly Gln Ala Ser Pro Ser Ile
            340                 345                 350

Glu Ala Phe Ala Asn Ala Arg Gly Ala Ala Tyr Glu Ile Phe Lys Ile
        355                 360                 365

Ile Asp Asn Lys Pro Ser Ile Asp Ser Tyr Ser Lys Ser Gly His Lys
    370                 375                 380

Pro Asp Asn Ile Lys Gly Asn Leu Glu Phe Arg Asn Val His Phe Ser
385                 390                 395                 400

Tyr Pro Ser Arg Lys Glu Val Lys Ile Leu Lys Gly Leu Asn Leu Lys
                405                 410                 415

Val Gln Ser Gly Gln Thr Val Ala Leu Val Gly Asn Ser Gly Cys Gly
            420                 425                 430

Lys Ser Thr Thr Val Gln Leu Met Gln Arg Leu Tyr Asp Pro Thr Glu
        435                 440                 445

Gly Met Val Ser Val Asp Gly Gln Asp Ile Arg Thr Ile Asn Val Arg
    450                 455                 460

Phe Leu Arg Glu Ile Ile Gly Val Val Ser Gln Glu Pro Val Leu Phe
465                 470                 475                 480

Ala Thr Thr Ile Ala Glu Asn Ile Arg Tyr Gly Arg Glu Asn Val Thr
                485                 490                 495

Met Asp Glu Ile Glu Lys Ala Val Lys Glu Ala Asn Ala Tyr Asp Phe
            500                 505                 510

Ile Met Lys Leu Pro His Lys Phe Asp Thr Leu Val Gly Glu Arg Gly
        515                 520                 525

Ala Gln Leu Ser Gly Gly Gln Lys Gln Arg Ile Ala Ile Ala Arg Ala
    530                 535                 540

Leu Val Arg Asn Pro Lys Ile Leu Leu Leu Asp Glu Ala Thr Ser Ala
545                 550                 555                 560

Leu Asp Thr Glu Ser Glu Ala Val Val Gln Val Ala Leu Asp Lys Ala
                565                 570                 575

Arg Lys Gly Arg Thr Thr Ile Val Ile Ala His Arg Leu Ser Thr Val
            580                 585                 590

Arg Asn Ala Asp Val Ile Ala Gly Phe Asp Asp Gly Val Ile Val Glu
        595                 600                 605
```

Lys Gly Asn His Asp Glu Leu Met Lys Glu Lys Gly Ile Tyr Phe Lys
610 615 620

Leu Val Thr Met Gln Thr Ala Gly Asn Glu Val Glu Leu Glu Asn Ala
625 630 635 640

Ala Asp Glu Ser Lys Ser Glu Ile Asp Ala Leu Glu Met Ser Ser Asn
645 650 655

Asp Ser Arg Ser Ser Leu Ile Arg Lys Arg Ser Thr Arg Arg Ser Val
660 665 670

Arg Gly Ser Gln Ala Gln Asp Arg Lys Leu Ser Thr Lys Glu Ala Leu
675 680 685

Asp Glu Ser Ile Pro Pro Val Ser Phe Trp Arg Ile Met Lys Leu Asn
690 695 700

Leu Thr Glu Trp Pro Tyr Phe Val Val Gly Val Phe Cys Ala Ile Ile
705 710 715 720

Asn Gly Gly Leu Gln Pro Ala Phe Ala Ile Ile Phe Ser Lys Ile Ile
725 730 735

Gly Val Phe Thr Arg Ile Asp Asp Pro Glu Thr Lys Arg Gln Asn Ser
740 745 750

Asn Leu Phe Ser Leu Leu Phe Leu Ala Leu Gly Ile Ile Ser Phe Ile
755 760 765

Thr Phe Phe Leu Gln Gly Phe Thr Phe Gly Lys Ala Gly Glu Ile Leu
770 775 780

Thr Lys Arg Leu Arg Tyr Met Val Phe Arg Ser Met Leu Arg Gln Asp
785 790 795 800

Val Ser Trp Phe Asp Asp Pro Lys Asn Thr Thr Gly Ala Leu Thr Thr
805 810 815

Arg Leu Ala Asn Asp Ala Ala Gln Val Lys Gly Ala Ile Gly Ser Arg
820 825 830

Leu Ala Val Ile Thr Gln Asn Ile Ala Asn Leu Gly Thr Gly Ile Ile
835 840 845

Ile Ser Phe Ile Tyr Gly Trp Gln Leu Thr Leu Leu Leu Leu Ala Ile
850 855 860

Val Pro Ile Ile Ala Ile Ala Gly Val Val Glu Met Lys Met Leu Ser
865 870 875 880

Gly Gln Ala Leu Lys Asp Lys Lys Glu Leu Glu Gly Ala Gly Lys Ile
885 890 895

Ala Thr Glu Ala Ile Glu Asn Phe Arg Thr Val Val Ser Leu Thr Gln
900 905 910

```
Glu Gln Lys Phe Glu His Met Tyr Ala Gln Ser Leu Gln Val Pro Tyr
        915                 920                 925

Arg Asn Ser Leu Arg Lys Ala His Ile Phe Gly Ile Thr Phe Ser Phe
    930                 935                 940

Thr Gln Ala Met Met Tyr Phe Ser Tyr Ala Gly Cys Phe Arg Phe Gly
945                 950                 955                 960

Ala Tyr Leu Val Ala His Lys Leu Met Ser Phe Glu Asp Val Leu Leu
                965                 970                 975

Val Phe Ser Ala Val Val Phe Gly Ala Met Ala Val Gly Gln Val Ser
            980                 985                 990

Ser Phe Ala Pro Asp Tyr Ala Lys Ala Lys Ile Ser Ala Ala His Ile
        995                1000                1005

Ile Met Ile Ile Glu Lys Thr Pro Leu Ile Asp Ser Tyr Ser Thr Glu
   1010                1015                1020

Gly Leu Met Pro Asn Thr Leu Glu Gly Asn Val Thr Phe Gly Glu Val
1025                1030                1035                1040

Val Phe Asn Tyr Pro Thr Arg Pro Asp Ile Pro Val Leu Gln Gly Leu
                1045                1050                1055

Ser Leu Glu Val Lys Lys Gly Gln Thr Leu Ala Leu Val Gly Ser Ser
            1060                1065                1070

Gly Cys Gly Lys Ser Thr Val Val Gln Leu Leu Glu Arg Phe Tyr Asp
        1075                1080                1085

Pro Leu Ala Gly Lys Val Leu Leu Asp Gly Lys Glu Ile Lys Arg Leu
   1090                1095                1100

Asn Val Gln Trp Leu Arg Ala His Leu Gly Ile Val Ser Gln Glu Pro
1105                1110                1115                1120

Ile Leu Phe Asp Cys Ser Ile Ala Glu Asn Ile Ala Tyr Gly Asp Asn
                1125                1130                1135

Ser Arg Val Val Ser Gln Glu Glu Ile Val Arg Ala Ala Lys Glu Ala
            1140                1145                1150

Asn Ile His Ala Phe Ile Glu Ser Leu Pro Asn Lys Tyr Ser Thr Lys
        1155                1160                1165

Val Gly Asp Lys Gly Thr Gln Leu Ser Gly Gly Gln Lys Gln Arg Ile
   1170                1175                1180

Ala Ile Ala Arg Ala Leu Val Arg Gln Pro His Ile Leu Leu Leu Asp
1185                1190                1195                1200

Glu Ala Thr Ser Ala Leu Asp Thr Glu Ser Glu Lys Val Val Gln Glu
                1205                1210                1215
```

```
Ala Leu Asp Lys Ala Arg Glu Gly Arg Thr Cys Ile Val Ile Ala His
          1220                1225                1230

Arg Leu Ser Thr Ile Gln Asn Ala Asp Leu Ile Val Val Phe Gln Asn
       1235                1240                1245

Gly Arg Val Lys Glu His Gly Thr His Gln Gln Leu Leu Ala Gln Lys
  1250                1255                1260

Gly Ile Tyr Phe Ser Met Val Ser Val Gln Ala Gly Thr Ile
1265                1270                1275
```

<210> 67
<211> 579
<212> PRT
<213> Homo sapiens

<400> 67

```
Met Asp Leu Glu Gly Asp Arg Asn Gly Gly Ala Lys Lys Lys Asn Phe
  1               5                  10                  15

Phe Lys Leu Asn Asn Lys Ser Glu Lys Asp Lys Lys Glu Lys Lys Pro
             20                  25                  30

Thr Val Ser Val Phe Ser Met Phe Arg Tyr Ser Asn Trp Leu Asp Lys
         35                  40                  45

Leu Tyr Met Val Val Gly Thr Leu Ala Ala Ile Ile His Gly Ala Gly
     50                  55                  60

Leu Pro Leu Met Met Leu Val Phe Gly Glu Met Thr Asp Ile Phe Ala
 65                  70                  75                  80

Asn Ala Gly Asn Leu Glu Asp Leu Met Ser Asn Ile Thr Asn Arg Ser
                 85                  90                  95

Asp Ile Asn Asp Thr Gly Phe Phe Met Asn Leu Glu Glu Asp Met Thr
            100                 105                 110

Arg Tyr Ala Tyr Tyr Tyr Ser Gly Ile Gly Ala Gly Val Leu Val Ala
        115                 120                 125

Ala Tyr Ile Gln Val Ser Phe Trp Cys Leu Ala Ala Gly Arg Gln Ile
    130                 135                 140

His Lys Ile Arg Lys Gln Phe Phe His Ala Ile Met Arg Gln Glu Ile
145                 150                 155                 160

Gly Trp Phe Asp Val His Asp Val Gly Glu Leu Asn Thr Arg Leu Thr
                165                 170                 175

Asp Asp Val Ser Lys Ile Asn Glu Gly Ile Gly Asp Lys Ile Gly Met
            180                 185                 190

Phe Phe Gln Ser Met Ala Thr Phe Phe Thr Gly Phe Ile Val Gly Phe
```

```
        195                 200                 205

Thr Arg Gly Trp Lys Leu Thr Leu Val Ile Leu Ala Ile Ser Pro Val
    210                 215                 220

Leu Gly Leu Ser Ala Ala Val Trp Ala Lys Ile Leu Ser Ser Phe Thr
225                 230                 235                 240

Asp Lys Glu Leu Leu Ala Tyr Ala Lys Ala Gly Ala Val Ala Glu Glu
                245                 250                 255

Val Leu Ala Ala Ile Arg Thr Val Ile Ala Phe Gly Gly Gln Lys Lys
            260                 265                 270

Glu Leu Glu Arg Tyr Asn Lys Asn Leu Glu Glu Ala Lys Arg Ile Gly
        275                 280                 285

Ile Lys Lys Ala Ile Thr Ala Asn Ile Ser Ile Gly Ala Ala Phe Leu
    290                 295                 300

Leu Ile Tyr Ala Ser Tyr Ala Leu Ala Phe Trp Tyr Gly Thr Thr Leu
305                 310                 315                 320

Val Leu Ser Gly Glu Tyr Ser Ile Gly Gln Val Leu Thr Val Phe Phe
                325                 330                 335

Ser Val Leu Ile Gly Ala Phe Ser Val Gly Gln Ala Ser Pro Ser Ile
            340                 345                 350

Glu Ala Phe Ala Asn Ala Arg Gly Ala Ala Tyr Glu Ile Phe Lys Ile
        355                 360                 365

Ile Asp Asn Lys Pro Ser Ile Asp Ser Tyr Ser Lys Ser Gly His Lys
    370                 375                 380

Pro Asp Asn Ile Lys Gly Asn Leu Glu Phe Arg Asn Val His Phe Ser
385                 390                 395                 400

Tyr Pro Ser Arg Lys Glu Val Lys Ile Leu Lys Gly Leu Asn Leu Lys
                405                 410                 415

Val Gln Ser Gly Gln Thr Val Ala Leu Val Gly Asn Ser Gly Cys Gly
            420                 425                 430

Lys Ser Thr Thr Val Gln Leu Met Gln Arg Leu Tyr Asp Pro Thr Glu
        435                 440                 445

Gly Met Val Ser Val Asp Gly Gln Asp Ile Arg Thr Ile Asn Val Arg
    450                 455                 460

Phe Leu Arg Glu Ile Ile Gly Val Val Ser Gln Glu Pro Val Leu Phe
465                 470                 475                 480

Ala Thr Thr Ile Ala Glu Asn Ile Arg Tyr Gly Arg Glu Asn Val Thr
                485                 490                 495

Met Asp Glu Ile Glu Lys Ala Val Lys Glu Ala Asn Ala Tyr Asp Phe
```

```
            500                 505                 510

Ile Met Lys Leu Pro His Lys Phe Asp Thr Leu Val Gly Glu Arg Gly
        515                 520                 525

Ala Gln Leu Ser Gly Gly Gln Lys Gln Arg Ile Ala Ile Ala Arg Ala
    530                 535                 540

Leu Val Arg Asn Pro Lys Ile Leu Leu Leu Asp Glu Ala Thr Ser Ala
545                 550                 555                 560

Leu Asp Thr Glu Ser Glu Ala Glu Val Gln Ala Ala Leu Asp Lys Val
                565                 570                 575

Ser Arg Leu
```

<210> 68
<211> 218
<212> PRT
<213> Homo sapiens

<400> 68

```
Met Ser Arg Ser Lys Arg Asp Asn Asn Phe Tyr Ser Val Glu Ile Gly
  1               5                  10                  15

Asp Ser Thr Phe Thr Val Leu Lys Arg Tyr Gln Asn Leu Lys Pro Ile
             20                  25                  30

Gly Ser Gly Ala Gln Gly Ile Val Cys Ala Ala Tyr Asp Ala Ile Leu
         35                  40                  45

Glu Arg Asn Val Ala Ile Lys Lys Leu Ser Arg Pro Phe Gln Asn Gln
     50                  55                  60

Thr His Ala Lys Arg Ala Tyr Arg Glu Leu Val Leu Met Lys Cys Val
 65                  70                  75                  80

Asn His Lys Asn Ile Ile Gly Leu Leu Asn Val Phe Thr Pro Gln Lys
                85                  90                  95

Ser Leu Glu Glu Phe Gln Asp Val Tyr Ile Val Met Glu Leu Met Asp
            100                 105                 110

Ala Asn Leu Cys Gln Val Ile Gln Met Glu Leu Asp His Glu Arg Met
        115                 120                 125

Ser Tyr Leu Leu Tyr Gln Met Leu Cys Gly Ile Lys His Leu His Ser
    130                 135                 140

Ala Gly Ile Ile His Arg Asp Leu Lys Pro Ser Asn Ile Val Val Lys
145                 150                 155                 160

Ser Asp Cys Thr Leu Lys Ile Leu Asp Phe Gly Leu Ala Arg Thr Ala
                165                 170                 175
```

```
Gly Thr Ser Phe Met Met Thr Pro Tyr Val Val Thr Arg Tyr Tyr Arg
            180                 185                 190

Ala Pro Glu Val Ile Leu Gly Met Gly Tyr Lys Glu Asn Gly Gly Arg
        195                 200                 205

Met Gly Lys Gly Ile Phe Thr Arg Leu Gln
    210                 215
```

<210> 69
<211> 307
<212> PRT
<213> Homo sapiens

<400> 69

```
Met Ser Arg Ser Lys Arg Asp Asn Asn Phe Tyr Ser Val Glu Ile Gly
  1               5                  10                  15

Asp Ser Thr Phe Thr Val Leu Lys Arg Tyr Gln Asn Leu Lys Pro Ile
             20                  25                  30

Gly Ser Gly Ala Gln Gly Ile Val Cys Ala Ala Tyr Asp Ala Ile Leu
         35                  40                  45

Glu Arg Asn Val Ala Ile Lys Lys Leu Ser Arg Pro Phe Gln Asn Gln
     50                  55                  60

Thr His Ala Lys Arg Ala Tyr Arg Glu Leu Val Leu Met Lys Cys Val
 65                  70                  75                  80

Asn His Lys Asn Ile Ile Gly Leu Leu Asn Val Phe Thr Pro Gln Lys
                 85                  90                  95

Ser Leu Glu Glu Phe Gln Asp Val Tyr Ile Val Met Glu Leu Met Asp
            100                 105                 110

Ala Asn Leu Cys Gln Val Ile Gln Met Glu Leu Asp His Glu Arg Met
        115                 120                 125

Ser Tyr Leu Leu Tyr Gln Met Leu Cys Gly Ile Lys His Leu His Ser
    130                 135                 140

Ala Gly Ile Ile His Arg Asp Leu Lys Pro Ser Asn Ile Val Val Lys
145                 150                 155                 160

Ser Asp Cys Thr Leu Lys Ile Leu Asp Phe Gly Leu Ala Arg Thr Ala
                165                 170                 175

Gly Thr Ser Phe Met Met Thr Pro Tyr Val Val Thr Arg Tyr Tyr Arg
            180                 185                 190

Ala Pro Glu Val Ile Leu Gly Met Gly Tyr Lys Glu Asn Val Asp Leu
        195                 200                 205
```

```
Trp Ser Val Gly Cys Ile Met Gly Glu Met Val Cys His Lys Ile Leu
    210                 215                 220

Phe Pro Gly Arg Asp Tyr Ile Asp Gln Trp Asn Lys Val Ile Glu Gln
225                 230                 235                 240

Leu Gly Thr Pro Cys Pro Glu Phe Met Lys Lys Leu Gln Pro Thr Val
                245                 250                 255

Arg Thr Tyr Val Glu Asn Arg Pro Lys Tyr Ala Gly Tyr Ser Phe Glu
            260                 265                 270

Lys Leu Phe Pro Asp Val Leu Phe Pro Ala Asp Ser Glu His Asn Lys
        275                 280                 285

Leu Lys Ala Ser Gln Tyr Phe Leu Gln Ile Cys Thr Phe Asn Pro Ile
    290                 295                 300

Trp Gly Val
305
```

<210> 70
<211> 339
<212> PRT
<213> Homo sapiens

<400> 70

```
Met Ser Arg Ser Lys Arg Asp Asn Asn Phe Tyr Ser Val Glu Ile Gly
  1               5                  10                  15

Asp Ser Thr Phe Thr Val Leu Lys Arg Tyr Gln Asn Leu Lys Pro Ile
             20                  25                  30

Gly Ser Gly Ala Gln Gly Ile Val Cys Ala Ala Tyr Asp Ala Ile Leu
         35                  40                  45

Glu Arg Asn Val Ala Ile Lys Lys Leu Ser Arg Pro Phe Gln Asn Gln
     50                  55                  60

Thr His Ala Lys Arg Ala Tyr Arg Glu Leu Val Leu Met Lys Cys Val
 65                  70                  75                  80

Asn His Lys Asn Ile Ile Gly Leu Leu Asn Val Phe Thr Pro Gln Lys
                 85                  90                  95

Ser Leu Glu Glu Phe Gln Asp Val Tyr Ile Val Met Glu Leu Met Asp
            100                 105                 110

Ala Asn Leu Cys Gln Val Ile Gln Met Glu Leu Asp His Glu Arg Met
        115                 120                 125

Ser Tyr Leu Leu Tyr Gln Met Leu Cys Gly Ile Lys His Leu His Ser
    130                 135                 140

Ala Gly Ile Ile His Arg Asp Leu Lys Pro Ser Asn Ile Val Val Lys
```

```
145                 150                 155                 160

Ser Asp Cys Thr Leu Lys Ile Leu Asp Phe Gly Leu Ala Arg Thr Ala
                165                 170                 175

Gly Thr Ser Phe Met Met Thr Pro Tyr Val Val Thr Arg Tyr Tyr Arg
            180                 185                 190

Ala Pro Glu Val Ile Leu Gly Met Gly Tyr Lys Glu Asn Val Asp Leu
        195                 200                 205

Trp Ser Val Gly Cys Ile Met Gly Glu Met Val Cys His Lys Ile Leu
    210                 215                 220

Phe Pro Gly Arg Asp Tyr Ile Asp Gln Trp Asn Lys Val Ile Glu Gln
225                 230                 235                 240

Leu Gly Thr Pro Cys Pro Glu Phe Met Lys Lys Leu Gln Pro Thr Val
                245                 250                 255

Arg Thr Tyr Val Glu Asn Arg Pro Lys Tyr Ala Gly Tyr Ser Phe Glu
            260                 265                 270

Lys Leu Phe Pro Asp Val Leu Phe Pro Ala Asp Ser Glu His Asn Lys
        275                 280                 285

Leu Lys Ala Ser Gln Ala Arg Asp Leu Leu Ser Lys Met Leu Val Ile
    290                 295                 300

Asp Ala Ser Lys Arg Ile Ser Val Asp Glu Ala Leu Gln His Pro Tyr
305                 310                 315                 320

Ile Asn Val Trp Tyr Asp Pro Ser Glu Ala Glu Ala Arg Ser Cys Lys
                325                 330                 335

Leu Phe Ser
```

<210> 71
<211> 178
<212> PRT
<213> Homo sapiens

<400> 71

```
Ala Arg Ser Gly Phe Tyr Arg Gln Glu Val Thr Lys Thr Ala Trp Glu
  1               5                  10                  15

Val Arg Ala Val Tyr Arg Asp Leu Gln Pro Val Gly Ser Gly Ala Tyr
             20                  25                  30

Gly Ala Val Cys Ser Ala Val Asp Gly Arg Thr Gly Ala Lys Val Ala
         35                  40                  45

Ile Lys Lys Leu Tyr Arg Pro Phe Gln Ser Glu Leu Phe Ala Lys Arg
     50                  55                  60
```

```
Ala Tyr Arg Glu Leu Arg Leu Leu Lys His Met Arg His Glu Asn Val
 65                  70                  75                  80

Ile Gly Leu Leu Asp Val Phe Thr Pro Asp Glu Thr Leu Asp Asp Phe
                 85                  90                  95

Thr Asp Phe Tyr Leu Val Met Pro Phe Met Gly Thr Asp Leu Gly Lys
            100                 105                 110

Leu Met Lys His Glu Lys Leu Gly Glu Asp Arg Ile Gln Phe Leu Val
        115                 120                 125

Tyr Gln Met Leu Lys Gly Leu Arg Tyr Ile His Ala Ala Gly Ile Ile
    130                 135                 140

His Arg Val Ser Pro Gly Gly Glu Ala Ala His Gln Pro Ser Pro Ser
145                 150                 155                 160

Ala Ile Pro Pro Pro Pro Arg Pro Thr Cys Glu Asp Val Met Gly Ser
                165                 170                 175

Gly Cys
```

<210> 72
<211> 648
<212> PRT
<213> Homo sapiens

<400> 72

```
Met Ser Pro Phe Leu Arg Ile Gly Leu Ser Asn Phe Asp Cys Gly Ser
  1               5                  10                  15

Cys Gln Ser Cys Gln Gly Glu Ala Val Asn Pro Tyr Cys Ala Val Leu
             20                  25                  30

Val Lys Glu Tyr Val Glu Ser Glu Asn Gly Gln Met Tyr Ile Gln Lys
         35                  40                  45

Lys Pro Thr Met Tyr Pro Pro Trp Asp Ser Thr Phe Asp Ala His Ile
     50                  55                  60

Asn Lys Gly Arg Val Met Gln Ile Ile Val Lys Gly Lys Asn Val Asp
 65                  70                  75                  80

Leu Ile Ser Glu Thr Thr Val Glu Leu Tyr Ser Leu Ala Glu Arg Cys
                 85                  90                  95

Arg Lys Asn Asn Gly Lys Thr Glu Ile Trp Leu Glu Leu Lys Pro Gln
            100                 105                 110

Gly Arg Met Leu Met Asn Ala Arg Tyr Phe Leu Glu Met Ser Asp Thr
        115                 120                 125
```

```
Lys Asp Met Asn Glu Phe Glu Thr Glu Gly Phe Phe Ala Leu His Gln
    130                 135                 140

Arg Arg Gly Ala Ile Lys Gln Ala Lys Val His His Val Lys Cys His
145                 150                 155                 160

Glu Phe Thr Ala Thr Phe Phe Pro Gln Pro Thr Phe Cys Ser Val Cys
                165                 170                 175

His Glu Phe Val Trp Gly Leu Asn Lys Gln Gly Tyr Gln Cys Arg Gln
            180                 185                 190

Cys Asn Ala Ala Ile His Lys Lys Cys Ile Asp Lys Val Ile Ala Lys
        195                 200                 205

Cys Thr Gly Ser Ala Ile Asn Ser Arg Glu Thr Met Phe His Lys Glu
    210                 215                 220

Arg Phe Lys Ile Asp Met Pro His Arg Phe Lys Val Tyr Asn Tyr Lys
225                 230                 235                 240

Ser Pro Thr Phe Cys Glu His Cys Gly Thr Leu Leu Trp Gly Leu Ala
                245                 250                 255

Arg Gln Gly Leu Lys Cys Asp Ala Cys Gly Met Asn Val His His Arg
            260                 265                 270

Cys Gln Thr Lys Val Ala Asn Leu Cys Gly Ile Asn Gln Lys Leu Met
        275                 280                 285

Ala Glu Ala Leu Ala Met Ile Glu Ser Thr Gln Gln Ala Arg Cys Leu
    290                 295                 300

Arg Asp Thr Glu Gln Ile Phe Arg Glu Gly Pro Val Glu Ile Gly Leu
305                 310                 315                 320

Pro Cys Ser Ile Lys Asn Glu Ala Arg Pro Pro Cys Leu Pro Thr Pro
                325                 330                 335

Gly Lys Arg Glu Pro Gln Gly Ile Ser Trp Glu Ser Pro Leu Asp Glu
            340                 345                 350

Val Asp Lys Met Cys His Leu Pro Glu Pro Glu Leu Asn Lys Glu Arg
        355                 360                 365

Pro Ser Leu Gln Ile Lys Leu Lys Ile Glu Asp Phe Ile Leu His Lys
    370                 375                 380

Met Leu Gly Lys Gly Ser Phe Gly Lys Val Phe Leu Ala Glu Phe Lys
385                 390                 395                 400

Lys Thr Asn Gln Phe Phe Ala Ile Lys Ala Leu Lys Lys Asp Val Val
                405                 410                 415

Leu Met Asp Asp Asp Val Glu Cys Thr Met Val Glu Lys Arg Val Leu
            420                 425                 430
```

Ser Leu Ala Trp Glu His Pro Phe Leu Thr His Met Phe Cys Thr Phe
435 440 445

Gln Thr Lys Glu Asn Leu Phe Phe Val Met Glu Tyr Leu Asn Gly Gly
450 455 460

Asp Leu Met Tyr His Ile Gln Ser Cys His Lys Phe Asp Leu Ser Arg
465 470 475 480

Ala Thr Phe Tyr Ala Ala Glu Ile Ile Leu Gly Leu Gln Phe Leu His
485 490 495

Ser Lys Gly Ile Val Tyr Arg Asp Leu Lys Leu Asp Asn Ile Leu Leu
500 505 510

Asp Lys Asp Gly His Ile Lys Ile Ala Asp Phe Gly Met Cys Lys Glu
515 520 525

Asn Met Leu Gly Asp Ala Lys Thr Asn Thr Phe Cys Gly Thr Pro Asp
530 535 540

Tyr Ile Ala Pro Glu Ile Leu Leu Gly Gln Lys Tyr Asn His Ser Val
545 550 555 560

Asp Trp Trp Ser Phe Gly Val Leu Leu Tyr Glu Met Leu Ile Gly Gln
565 570 575

Ser Pro Phe His Gly Gln Asp Glu Glu Glu Leu Phe His Ser Ile Arg
580 585 590

Met Asp Asn Pro Phe Tyr Pro Arg Trp Leu Glu Lys Glu Ala Lys Asp
595 600 605

Leu Leu Val Lys Val Arg Ser Glu Ala Lys Ser Val Phe Ile Arg Arg
610 615 620

Ala Leu Gly Leu Leu Val Ser Phe Leu Phe Leu Leu Val Ser Asn Leu
625 630 635 640

His Val Ala Asn Asn Asp Tyr Tyr
645